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Fishing Log Program
Fisheries Information Services
Montana Fish, Wildlife & Parks
1400 South 19th Avenue
Bozeman, MT 59718
(406) 994-6838

# FISHING LOG NEWSLETTER

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# MONTANA REGIONAL UPDATES

## REGION ONE - KALISPELL

Drought continues to dominate discussions about fish and fishing statewide. In northwest Montana, the year started with reasonable rain and snow, then dried up for most of the summer. Streamflows declined to well below average but, fortunately, not to critical levels. The Thompson River has a low elevation watershed and it did go to voluntary "hoot-owl" restrictions in late summer. Then fall came roaring in with record or near-record rainfall. One stretch of the Swan Mountain crest recorded nearly 12" of rain in one week. Streamflows tripled for several weeks. The downpours just brought annual precipitation for the area to about average. It seems funny to celebrate being average but seven years of drought alters your perspective. The rain did replenish some groundwater and soil moisture. We can only hope for decent snow this winter and better flows in 2005.

Spring moisture did allow all northwest Montana reservoirs to refill except for Hubbart Reservoir. Hubbart has been hard hit the last few years and was scheduled for a complete drawdown in 2004 for a dam safety inspection. The FWP Commission lifted fishing limits prior to the drawdown which drew a surprising crowd of anglers looking for "fish in a barrel." They were foiled by turbid water and a muddy shoreline. There was a plan to salvage and transplant gamefish to nearby waters that was foiled by discovery of bacterial kidney disease. Some fish were salvaged for dissection in the "Hooked on Fishing, Not on Drugs" school program. Discussion are now underway with the dam operators to mitigate loss of the fishery.

Montana's kokanee hatchery program is based on wild broodstocks with the bulk of the salmon eggs typically coming from Lake Mary Ronan. Mary Ronan has been hit hard by an illegal introduction of yellow perch with salmon numbers declining almost 70 percent over the last decade. A poor summer salmon fishery led to the prediction the egg-take would be poor this fall. As usual, kokanee fooled us and hatchery crews gathered over five million kokanee eggs so all kokanee demands for 2005 will be met. Spawntaking has now shifted to Little Bitterroot Lake.

Last fall, hatchery personnel from the Flathead Lake State Fish Hatchery cooperated with the Marion School "Hooked on Fishing" class in a unique project. Students from nearby Marion actually spawned a batch of Bitterroot salmon, taking nearly 15,000 eggs. "Their" eggs were held separate and taken to the Flathead hatchery for incubation. In January, the students visited the hatchery to learn about salmon culture and see "their" eggs hatching. Then in May, the students released "their" salmon fingerlings back into the lake to complete the cycle.

The rest of the Region 1 hatchery program has struggled. Drought conditions have curtailed spring flows and fish production at some hatcheries. The loss of production from the lower hatchery at Big Springs State Fish Hatchery near Lewistown due to the discovery of PCB-based paint led to major cutbacks in 2005. Region 1 directed most cuts at larger waters where multiple fish species and multiple year classes should cushion the cuts. Priority was given to preserving broodstocks, high value recreational fisheries, and family fishing ponds.

Anglers got a renewed opportunity to fish for bull trout in northwest Montana. When bull trout were listed as threatened under the Endangered Species Act in 1998, all bull trout fishing in Montana was closed except for Swan Lake. Due to conservation measures, the bull trout populations in Hungry Horse Reservoir and connected South Fork Flathead River, and Lake Koocanusa are considered to have reached population recovery goals. Subsequently, the U.S. Fish and Wildlife Service approved experimental recreational bull trout fisheries on those three waters. Anglers were allowed to harvest only one bull trout per day, two bull trout per year out of Hungry Horse and Koocanusa each. The South Fork Flathead was catch and release only. Anglers had to get a permit and catch card to fish for bull trout and more than 2,700 signed up. FWP is now surveying angler effort and success. Early returns indicate anglers were conservative as hoped, catching fair numbers of bull trout but releasing most.

Fall, 2004 bull trout redd counts for the South Fork Flathead and Koocanusa were at near record levels so the recreational fishing didn't have any apparent impacts. Swan drainage bull trout redd counts were also high but the discovery of lake trout juveniles in Swan Lake gives some concern for the future. Flathead bull trout were hit hard in the early 1990s by drought and a lake trout boom. Flathead management has been aimed at reducing lake trout numbers to better balance with other fish species. This year's redd counts are still low as predicted but did show some slight gains over the previous generation. If recovery continues as predicted Flathead redd counts will start climbing next year.

Warmwater anglers proposed the FWP Commission lift a ban on stocking of walleyes west of the Divide. The Commission put the proposal out for public discussion and it generated over 120 responses. Comments were about 12:1 opposed to lifting the ban based on potential impacts on trout and salmon, particularly native salmonids, the threat of illegal fish introductions, and the availability of walleye fishing east of the Divide. The proposal stirred the most public input of any issue in the last five years. In the end, the Commission voted to leave the ban in place. Attention has now shifted to other warmwater management in Region 1.

Illegal fish introductions continue to be a problem. The database is being updated but reports continue to trickle in. The count is now 470 illegal introductions in 269 waters statewide. About half of those are in Region 1. Of particular concern are reports of lake trout reproduction in Swan Lake and walleye reproduction in Noxon Rapids Reservoir. That could lead to established populations in those waters. Black crappie were illegally planted in Blanchard Lake north of Kalispell ten years ago. Crappie showed up in two other nearby waters this year, leading to fears that Blanchard could become a seed source and discussions of how to halt the spread. The most stringent controls being discussed are severe measures like chemical rehabilitation or closing the lake to all fishing. Tough choices but the alternative is to do nothing and watch the crappie – and impacts – spread.

## *CUTBOW COOPERATION*

Ashley Lake, a large lake in Northwestern Montana, is popular for its clean waters and kokanee salmon fishing. Ashley Lake also has three of Montana's state fish records, including yellow perch, pygmy whitefish and the hybrid cutthroat/rainbow trout. In fact, the 30-pound "cutbow" trout is not only a State record, but also a world record. Pat Kelly of Kalispell caught the giant trout in 1982.

The Ashley Lake spawning streams are small and suffer from dewatering and high sediment levels, especially during extended drought periods. This limits the number of wild trout that are produced. In an effort to increase fish numbers, there is an ongoing cooperative effort to raise and stock these cutbows. Montana Fish, Wildlife and Parks, the U. S. Fish and Wildlife Service and private landowners on the lake are working together to improve the fishery. "It is great to see the government agencies and private landowners working together on this project," said Jim Vashro, fisheries manager for Region 1 in Northwestern Montana. "This project will improve the fishing without compromising the genetic make-up that produced the world record size fish" said Vashro.

*Ruth Barber with her state record lake trout taken from Flathead Lake in June of 2004.*

In the spring, Stewart Kienow and Brian Strohschein, hatchery personnel from Montana Fish Wildlife and Parks, set traps in Ashley Lake to capture large cutbows on their way to spawning streams. In 2004, they took roughly 30,000 eggs from these fish and delivered them to a small private hatchery at Ashley Lake. Gar Holmes, a hatchery worker for the U.S. Fish and Wildlife Service, maintains the hatchery on his property. The Fish and Wildlife Service provides his time and fish food. Mr. Holmes raises the fish though the early summer months. Mr. Kienow and Strohschein then transfer these young fish from the hatchery to the stream inlet where the eggs were collected. Private landowners come from around the lake help release the 2-inch fish into the lake.

Very important to this process is the help provided by the landowner at the stream inlet. "Frank Gamma is the main reason this works well," said Kienow. Mr. Gamma has been watching over the spawning fish for years, helping with egg collections, and protecting the traps from vandalism. " No one cares more for these cutbows and the fishery than Frank, without his help and cooperation this would not be possible" said Strohschein.

This program began in 2002 and will continue for years to come. The small fish are marked with a dye while in the hatchery. FWP fisheries personnel will be assessing the success of this effort by catching and checking large cutbows in the future to determine if they were raised in hatchery. "We annually monitor the fish population in Ashley Lake and with time will determine what proportion of the cutbow population originates from this stocking effort" said Mark Deleray, fisheries biologist for FWP. The project started by stocking 20,000 to 30,000 fry per year, in the future this number may be increased or decreased dependent on the survival of the fish. "Just this year, we captured the first stocked fish in our surveys. We expect to see more fish in the upcoming years" said Deleray.

## REGION TWO - MISSOULA

Drought has been in the news a lot lately. Region 2 has been fortunate to not have the severe drought experienced elsewhere. Recent years have been typified by low snowpack with the severity of the drought dependent on summer weather. Hot, dry summers often lead us to angling restrictions whereas timely summer rains have kept us from implementing drought regulations. Each year, however, we seem to be on the verge. This suggests two things. First, we need a good snowpack to avoid drought's effects on fishing and fishing opportunity regardless of summer weather. And, second, drought has become more the norm than the exception. The trout could use a year with ample space and cold water in which to live. To trout, a so-called more "normal" year would be very newsworthy.

A major change occurred in one of our Region's blue ribbon trout fisheries. The Rock Creek fishery has undergone a transformation from a predominantly rainbow trout fishery to one that is mostly brown trout. The fishery is now about three-quarters brown trout, according to spring estimates in 2004.

The underlying cause appears to be whirling disease. Whirling disease affects rainbow trout much more than brown trout in systems like Rock Creek. Dr. Bill Granath of the University of Montana first recorded whirling disease in Rock Creek in 1997. The decline of rainbow trout began between 1993 and 1996, suggesting the parasite was affecting fish populations earlier. The disease has spread rapidly since its discovery in 1997 and is now widely spread in the drainage.

Brown trout have been the beneficiary of the rainbow's demise but, fortunately, there has been little change in the number of catchable sized (>13 inches) trout in the creek since the mid to late 80's. Unfortunately, cutthroat and bull trout have shown no change associated with the decrease in rainbow.

The future of the Rock Creek fishery is unknown but may have an upside. We may be seeing the worst of whirling disease in the drainage. Drought plays a role in the frequency and intensity of infections. Drought results in low water, increasing the concentration of the parasite in the water. With more water we may see improved rainbow trout numbers.

## REGION THREE – BOZEMAN

### *THE UPPER JEFFERSON GETS A NEW SPAWNING TRIBUTARY FOR RAINBOW TROUT*

Prior to 1986, Hell's Canyon Creek was the only spawning tributary for rainbow trout in the upper Jefferson River. Eggs from the Hell's Canyon Creek spawning population were imprinted on a second spawning tributary in 1986, and anglers have enjoyed the benefits of increased rainbow trout production in the Jefferson River for the past several years.

In 2004, a third spawning tributary in the upper Jefferson was developed by landowners, Trout Unlimited, FWP, and a 4-H volunteer. The landowner converted a slough into a spring creek, FWP and Trout Unlimited provided wild rainbow trout eggs to be imprinted on the new tributary, and Ryan Hunt took care of the eggs and young sac fry as a project for 4-H. After several weeks of taking care of incubating eggs and sac fry, Ryan released about 3,000 rainbow trout fry into the newly developed spawning stream in June.

Biologists sampled the new tributary south of Whitehall in November and found numerous young rainbow trout residing in their new habitat. Assuming that these trout will behave like their parents, we expect most of the young rainbows to migrate to the Jefferson River, where they will grow and mature before returning to this stream to spawn in 2006.

### *MADISON RIVER*

Spring and fall electro-fishing surveys showed stable trends in trout abundance in each section where fish numbers are routinely monitored. Abundance of rainbow trout six inches and larger was between 1,000 and 1,500 fish per mile in the Pine Butte, Varney, and Norris sections of the Madison River. This abundance suggests some recovery from losses attributed to whirling disease in the mid 1990s. Brown trout abundance was between 1,000 and to 2,500 in these same sections.

### *WEST GALLATIN RIVER*

Rainbow trout abundance in the West Gallatin River was similar this year compared to recent surveys. Estimates of fish six inches and larger in the Porcupine and Jack Smith sections of this river have regularly been 2,000 to 5,000 fish per river mile in recent years.

### *EAST GALLATIN RIVER*

Although trout abundance of fish six inches or larger has been stable in the East Gallatin River the last few years, we continue to note that small fish occur less frequently in samples than we might expect considering the number of larger fish. This absence may be attributable to whirling disease effects, a possibility we are actively investigating at this time.

### *YELLOWSTONE CUTTHROAT TROUT RESTORATION PROGRAM FOCUSES ON PRIVATE LANDS*

Uttering the words "Endangered Species" in parts of Montana is enough to send landowners scurrying for cover. The Endangered Species Act is a focus of hot debate among conservationists and property-rights advocates alike. A common complaint is that the Act ties the hands of landowners creating disincentives to do good things for plant and animals at risk of extinction. Through the U.S. Fish and Wildlife Service, Congress established the Landowner Incentive Program to create incentives for landowners to help keep species off of the Endangered Species List.

Montana Fish, Wildlife, and Parks secured a three-year grant through the Landowner Incentive Program to restore Yellowstone cutthroat trout on private lands in the upper Yellowstone River basin, from Yellowstone National Park to the Billings area.

Yellowstone cutthroat trout were the subject of a 1998 petition for listing as a Threatened Species. A recent ruling by the U.S. Fish and Wildlife Service that Yellowstone cutthroat trout were not a "Threatened Species" under the Act drew fire and a lawsuit from the organizations that filed the petition.

"Yellowstone cutthroat trout have been a species of concern to FWP for a long time. Until recently, we really didn't have a handle on their broad distribution within their native range" said Pat Byorth, FWP fisheries biologist assigned to the Landowner Incentive Program for Yellowstone cutthroat trout. "An interstate/interagency status review completed last year gave us a clear picture of where they are and what they need."

What biologists from Montana, Wyoming, and Idaho found in the status review was that Yellowstone cutthroat trout are still widespread, but subject to a number of threats, from interbreeding with rainbow trout to agricultural impacts.

"Private lands provide important cutthroat habitat, but plenty of work needs to be done to restore and protect cutthroats on these lands within the native range" said Byorth. "The key is building trust with landowners and providing technical and financial assistance to help them get the job done."

Efforts are already underway to restore stream habitats, fence cattle away from streams, and rebuild more fish-friendly irrigation diversions. "The Shields and Upper Yellowstone river drainages are strongholds for Yellowstone cutthroats. Thankfully, the community up there has led the charge to enhance stream habitats through the Upper Shields Watershed Association and the Upper Yellowstone Watershed Basin. Groups like that will make all the difference in restoring cutthroats".

The goal of FWP and the Landowner Incentive Program is to secure long-term survival of Yellowstone cutthroat trout through community, landowner-based efforts, rather than relying on the Endangered Species Act to do the job by force of regulations.

### *HIGHLIGHTS OF THE 2004 SEASON FROM THE ENNIS FISH CREW*

The 2004 season was busy for the Ennis Crew (Pat Clancey Fisheries Biologist, Travis Lohrenz and Chad Taber, Fisheries Technicians). The technicians devoted much of the field season to work on the tributaries of Hebgen Reservoir. Travis and Chad ran two screw traps this season on Duck Creek and the South Fork Madison. This was a continuation of Darin Watschke's thesis work monitoring the out migration of juvenile and young of the year rainbow trout to Hebgen reservoir. In addition to the screw traps, approximately 11,000 rainbow trout fry were coded wire tagged on the South Fork Madison. This large tagging effort was undertaken to monitor rainbow fry emigration to the reservoir and to track predation on fry by larger fish in the Hebgen Reservoir system. This project will be continued in 2005.

The Ennis Crew also worked on the Cherry Creek Native Fish Introduction Project, which is coordinated by Pat Clancey. We collected gametes from Westslope cutthroat trout for the Westslope Cutthroat Trout Conservation and Restoration Project. Continued monitoring Madison grayling with electrofishing efforts in the spring on the Channels Ranch and beach seining for juvenile grayling in Ennis reservoir this fall. Radio tags were deployed in brown trout, rainbow trout, and mountain white fish between Ennis dam and the Madison Powerhouse. This is a continuation of an effort to monitor movements of fish in response to flow changes induced by Ennis dam and movement associated with seasonal changes.

Last but not least, the Ennis Fisheries Crew assisted the Region 3 Bozeman Fisheries Crew with population estimates on the Madison and Gallatin rivers during the spring and fall of 2004, and helped with spring gillnetting on Hebgen Reservoir.

## REGION FOUR – GREAT FALLS

### *TIBER RESERVOIR*

Anglers enjoyed excellent walleye fishing on Tiber once again during 2004. This reservoir on the Marias River has proven to be one of Montana's most consistent walleye fisheries. However, in past years most harvested walleye were quite small (about 13 inches). The size and condition of walleye caught by anglers improved in 2003 and again in 2004. Excellent spottail shiner production in 2002 and 2003 contributed to these improvements, but exceptional cisco production during 2002 also likely played a role. Cisco (lake herring) were introduced into Tiber in 1997 and 1998 to enhance the forage base for walleye and northern pike, but prior to 2002 very little natural reproduction of cisco had occurred. Since the production of the first strong naturally-produced year class in 2002, cisco growth rates have declined dramatically, thus increasing their vulnerability to walleye. As a result of this additional forage in Tiber, the reservoir is producing trophy-sized northern pike and lake trout, which are seldom targeted by anglers. Continued improvements in Tiber's walleye fishery should be realized with additional cisco production in future years. However, very limited cisco production occurred during 2004, for unknown reasons.

Gill net catches of walleye and northern pike in Tiber were comparable to survey results in 2002 and 2003. Yellow perch numbers dropped off relative to what was sampled in 2003, but are still higher than historic average. These populations are all sustained through natural reproduction; no stocking occurs in Tiber.

### *LAKE FRANCES*

The walleye fishery in Lake Frances continues to peak. Fall gill net sampling indicated this population is at its highest level since annual surveys were initiated in the early 1970s. In contrast, northern pike and yellow perch numbers in Lake Frances declined substantially from 2003 levels. Although it is unclear why pike numbers dropped, predation pressure likely resulted in the decline of the perch population. A poor snowpack and heavy irrigation demands resulted in Lake Frances being quite low throughout the summer and fall. Forage fish are more susceptible to predation under these conditions, as there is little hiding cover in the reservoir. Netting results indicated the yellow perch population declined about 75% since last year.

Although anglers endured a couple of tough fishing years during 2002 and 2003, walleye fishing was excellent on Lake Frances during 2004. Anglers enjoyed very high walleye catch rates throughout the summer and well into the fall. Boating access became difficult as the reservoir receded, but eventually anglers will be better able to launch at an improved low-water access site at the tip of "the island". Currently, a new boat ramp is being constructed at this site (Figure 1). This project has been in the works for several years and is cooperatively funded by Walleyes Unlimited and MTFWP. The Town of Valier has agreed to maintain the facility, which will also include a new, portable floating breakwater. Construction should be completed during the fall of 2004.

### *BYNUM RESERVOIR*

Similar to the past several years, the ongoing drought continues to limit the fishery and fishing opportunities in Bynum Reservoir. No sampling was completed in Bynum during 2004, and no walleye were stocked due to the very low water conditions. This small reservoir received little water during spring 2004 and irrigation demands drew it down to near dead storage by mid summer. It is not likely the walleye stocked during 2002 and 2003 will survive the current reservoir conditions. No future stockings are planned until water conditions improve.

### *PISHKUN RESERVOIR*

This past spring FWP fisheries personnel again removed 500 northern pike from Pishkun in an attempt to reduce predation pressure in this reservoir. These fish were transplanted into nearby Split Rock Lakes, and many anglers took advantage of the enhanced pike fishing opportunities there. Pike suppression efforts will continue in Pishkun for another couple of years while biologists monitor the effectiveness of this program. It is hoped these efforts will lead to better perch fishing, improve pike growth rates, and provide an opportunity to establish a rainbow trout fishery in this reservoir. An increase in the size of the pike handled this past spring suggested that growth rates might be improving. However, very few of the 150,000 surplus rainbow trout stocked into Pishkun during 2003 were sampled in netting surveys. These management strategies are outlined in the current "Montana Warmwater Fisheries Management Plan".

### *OTHER EAST FRONT RESERVOIRS*

Fall netting surveys indicated good survival of stocked rainbow trout in **Nilan** and **Willow Creek** reservoirs. Similar to 2003, **Eureka** Reservoir could not be sampled this fall because of low water conditions. Stocking rates of these popular trout fisheries will be reduced by about one-half in 2005 because of the loss of production at Big Springs State Fish Hatchery in Lewistown due to the PCB issue.

**Bean Lake** continues to lose the battle with drought. This natural pothole lake lost another foot of elevation during 2004 and now has a maximum depth of about 14 feet. Kamloops-strain rainbow trout stocked into Bean Lake during 2003 provided hope of resurrecting this once popular fishery, as these fish demonstrated phenomenal initial growth. However, these fish did not overwinter even though windmills and a compressor were used to aerate the lake to promote their survival. Low water and poor water quality (high alkalinity) limit the opportunities to maintain this once popular trophy trout fishery. FWP will consult with fisheries managers in other arid western states to see if more alkaline-tolerant strains of trout are available for experimental stocking. In the long run, the best solution may be to work with local water users to find a way to augment water level.

### *MISSOURI AND SMITH RIVERS*

In 2003, whirling disease infection levels in the Dearborn River system were high, and the disease was found throughout the river and its main tributaries. The Dearborn system is extremely important as it is the principal spawning and rearing area for Missouri River rainbows. Although 2004 samples have not yet been analyzed, cages of test fish were placed in 6 locations throughout the Dearborn river system to monitor infection levels. These results will help us better understand the extent of whirling disease infections, but it may be years before the full impact of whirling disease on the Missouri River is realized.

Population estimates conducted in the Missouri River during 2004 showed mixed results. Brown trout numbers showed a slight improvement over the 2003 estimates. In the Craig area, the number of brown trout 10 inches and longer per mile increased to 650, up from 500 in 2003. Similarly, in the Pelican Point area the number of brown trout 10 inches and longer increased to over 450, which was similar to the 2002 level. In both cases, the number of brown trout per mile is slightly higher than the long-term average. Early results from the 2004 fall samples indicate that rainbow trout numbers have continued to decline in both sections of the Missouri, but the estimates are still similar to the long-term averages. In the Craig area, the 2004 preliminary estimate for rainbow trout 10 inches and longer per mile was just over 2,550. The long-term average in the Craig section is 2,900 per mile. In the Pelican Point area, rainbow trout numbers are still above the long-term average. The 2004 estimate was 1,900 per mile, about 500 higher than the long-term average.

Despite the extended drought, a slight improvement in recruitment of rainbow trout was observed in 2004 on the upper Smith River. The preliminary estimate in the Eagle Creek section of 365 rainbows 8" and longer per mile is up from the 2003 estimate, but is still only 65% of the long-term average. Rainbow trout estimates from the Deep Creek section and brown trout estimates for both sections have not yet been completed.

### *WADSWORTH LAKE DREDGING PROJECT*

Wadsworth Lake is an approximate 50-acre water body located on the outskirts of Great Falls and owned by the City. The pond was created by the U.S. Army Corps of Engineers in the 1970's as a borrow area for material used to construct a flood-control levee along the Sun River. The excavation intercepted several springs and the pit eventually filled with water. The lake has provided marginal fishing for perch and bullheads that entered via a canal connection with the nearby Sun River. The pit was not designed as a fishing pond, and hence is overly shallow and becomes choked with aquatic weeds in the summer. The weeds provide too much hiding cover for the panfish, and they became "stunted". There are very few "flatwater" urban fishing opportunities in the Great Falls area, hence it has been a priority to improve the fishery in Wadsworth. This is the site of one of the largest annual "kids fishing" events in Montana. The event is sponsored by the Great Falls Chapter of Walleyes Unlimited in cooperation with FWP and numerous other organizations and attracts more than a thousand people each year.

FWP has stocked predators (walleye and bass) in attempt to control stunted panfish, with limited success. Shallow depth and limited fishability in the summer continue to be problems. In response, FWP has worked closely with PPL Montana, the Great Falls Chapter of Walleyes Unlimited, and the City of Great Falls to deepen the west end of the lake. An engineering study completed in 2002 recommended hydraulic dredging as the most cost-effective method to deepen the lake. Over the following two years, funding was secured, the project was designed, bids were solicited. Dredging began this summer. The operation consists of a floating barge with dredging unit, a floating slurry pipeline, and an 11-acre settling pond. As it turns out, the clayey material on the lake bottom is turning out to be much more stubborn than anyone anticipated, and progress has been very slow. At present, it is uncertain how successful the dredging operation will be. To our knowledge, this is the first dredging project of this kind in Montana and it has been a "learning experience".

### *SUN RIVER ADOPT-A-FISH PROGRAM*

For more than a decade, FWP has actively participated in the Sun River Watershed Group to find ways to improve the depressed fishery in the Sun River. This river has excellent fish populations in its headwater reaches above Gibson Reservoir. However, trout numbers decline dramatically in the 90 miles of river downstream from Gibson due to heavy irrigation withdrawals.

To raise public awareness of the problems and potential in the Sun River, FWP is working with several other groups including the US Bureau of Reclamation and Trout Unlimited to develop an Adopt-A-Fish program. The program is modeled after similar efforts in the Milltown Dam area in western Montana and the Missouri River in eastern Montana. The idea is to implant radio transmitters in rainbow trout below Gibson Dam and involve local schools in tracking the fish. Approximately

60 students (grade 3-6) from schools in Fairfield, Power, and Greenfields participated in the first field trip in October. They toured the dam and irrigation facilities and observed demonstrations on fish biology, electrofishing, and radio transmitter implantation. Later, volunteers from the Missouri River Flyfishers club assisted in capturing more fish for transmitter implants.

Radio tags have been placed in 20 rainbow trout, and they are "programmed" to begin transmitting in early spring. In the meantime, FWP personnel are working on development of a website where classrooms will be able to "adopt" a fish and follow its movements via computer. A FWP technician will attempt to relocate fish weekly and update the website with new locations.

*FWP fisheries biologist Dave Yerk explains radio tracking to local schoolchildren as part of Sun River Adopt-A-Fish program.*

### *HAUSER RESERVOIR*

Hauser Reservoir was "the place to be" for rainbow fisherman in 2004 as catch rates reached a 16-year record high through the winter ice fishing season and continuing into the summer season. Recent changes in hatchery rainbow stocking have proven successful; first, rainbows that are stocked as 8" avoid walleye predation better and survive roughly twice as well as rainbows stocked at 5". Secondly, these larger fish are being stocked in early October as opposed to July to take advantage of predators that are slowing down for the winter. Lastly, the recent drought years have benefited Hauser Reservoir since fewer fish are being flushed over Hauser Dam.

Excellent rainbow catch rates will be difficult to maintain as recent findings of PCB's in the Lewistown hatchery will have a major impact on the number and size of hatchery rainbow trout that will be available in 2005 and 2006. Reductions could be up to 30% or more of recent stocking rates. The fishery will be impacted for several years until stocking rates return to normal levels.

Kokanee salmon catch rates remained low for Hauser anglers. However, recent hatchery kokanee releases have proven once again that larger hatchery fish can avoid predation and survive to maturity. Kokanee planted in 2002 as 7" fish survived reasonably well but did not provide much contribution to angler catch. The PCB's found at the Lewistown hatchery have impacted kokanee salmon stocking as well. The result is that no hatchery kokanee were stocked in 2004 and none will be stocked in 2005. A major effort to restore the kokanee fishing via hatchery stocking over the past several years has not been successful. Biologists believe kokanee re-establishment is prevented by excessive predation by the expanded walleye population in Hauser, which is maintained by natural reproduction and flushing of walleye from Canyon Ferry Reservoir, located immediately upstream.

Yellow perch habitat enhancement projects continued in 2004. Rather than using discarded Christmas trees as habitat, nearly 700 Junipers were cut, bundled and placed in locations that perch can use for spawning and rearing. Junipers were chosen as they appear to last longer in the water and don't degrade as fast as Christmas trees. This is the fifth year of reservoir habitat enhancement and plans are to continue in 2005. Netting results in the fall of 2004 were disappointing, especially after a significant increase in perch was observed in 2003. Perch are very vulnerable to predation and are a preferred food item of walleye.

Walleye densities have remained stable since 2000 providing a good fishery during the early spring and summer months. Good numbers of walleye produced in 1996 and 1997 remain in Hauser and these fish currently range from 4 to 7 pounds. In addition, good numbers of 12 to 16 inch walleye were collected in fall nets.

Progress is being made to resolve the Hauser low dissolved oxygen problem. Water is discharged into Hauser from Canyon Ferry Reservoir, which is located immediately upstream. This water has been shown to have insufficient dissolved oxygen for 90-120 days every fall. The dissolved oxygen in this water has fallen as low as 2.7 milligrams per liter of water (state standard=6.5mg/L). Ideally, trout and salmon need 7.5mg/L for normal growth and survival. The Bureau of Reclamation is responsible for the operation of Canyon Ferry Dam and has been working on solutions to the problem by adding air to the water as it passes through the turbines in the dam. These efforts continued in 2004 although results are not available at this time.

### *HOLTER RESERVOIR*

Holter Reservoir rainbow fishing reached near-record levels in 2004 beginning in April and May when the big rainbows show up near the shoreline around BLM and Log Gulch boat ramps. This early fishery provides an excellent opportunity for young anglers as fish are close to shore and are easily accessed. Rainbow catch rates remained strong through the summer and fall months for anglers trolling in the lower half of the reservoir (Split Rock to the Dam). Similar to Hauser Reservoir, results from experimental rainbow plants since 1996 show that larger hatchery rainbow survive substantially better than small rainbow. Future rainbow trout management in Holter Reservoir will include an increase in the percentage of late-fall release rainbow that are of larger size (approximately 8 inches).

Hatchery rainbow stocking in Holter Reservoir will be substantially reduced in 2005 and 2006. Holter relies on the Lewistown hatchery for the vast majority of rainbows that are stocked each year. The Lewistown hatchery will be producing only a portion of historic numbers of fish due to PCB cleanup efforts. The result of this will be fewer hatchery rainbow stocked into Holter, which will likely translate to reduced angler catch rates.

Walleye fishing was also excellent in Holter in 2004. The strong 2001-year class of walleyes was abundant in the summer creel with the majority of fish being 12-14 inches long. Walleye were found throughout the reservoir and limit catches were common. Winter ice fishing for perch was variable with high catch rates in January and declining in February through March. Perch collected in gillnet samples declined in 2004 and remain well below the management plan goal.

Kokanee salmon provided a small component of the Holter fishery in 2004. The majority of the fish caught were hatchery fish stocked in 2002. As with Hauser, these fish were in spawning condition in the fall of 2004 and the hope is that these fish will successfully spawn and continue to provide a wild kokanee salmon fishery. However, as has been demonstrated with reductions in yellow perch, walleye predation plays a significant role in shaping the Holter fishery. Wild kokanee salmon are vulnerable to predation and recovery of this once popular fishery will be difficult.

### *PRAIRIE FISH SURVEY*

A survey of 96 sites on 93 streams in northcentral Montana was conducted during the summer of 2004 as part of the ongoing Montana prairie stream inventory. This was the second year of the survey and the first time most of the sites had been sampled. Of the 96 sites surveyed, 53 were dry, 19 contained water but not fish, and 24 had fish. A total of 9,103 fish including 25 species were captured. Nineteen species were native to Montana and 6 were introduced. The fathead minnow had the greatest distribution at 19 sites. Carp were the most widely distributed non-native species.

### *BIG SPRING CREEK*

In 2004, population estimates were completed on four sections of Big Spring Creek. Trout populations on a section immediately downstream of the Big Springs State trout hatchery were evaluated for the first time since the late 1960's. The other sections, Burleigh and Brewery Flats (upstream from Lewistown), and Carroll Trail (below Lewistown) are long-term monitoring sections. In 2004, trout estimates (10 inches and larger) varied from about 420 - 1900 per mile depending on the section. Numbers of both large and small rainbow trout declined or were similar to 2003 in all sections. Brown trout numbers (10 inches and larger) remained similar to 2003 in the Burleigh and Carroll Trail sections but increased by more than 25% at Brewery Flats.

Brewery Flats underwent a major restoration project in the fall of 2000 when Big Spring Creek was moved into 4000 feet of new channel. This area now appears to be growing many more large trout than before the project. There were over 1000 trout (10 inches and larger) per mile in the Brewery Flats section in 2004. This is a record high number and can be primarily attributed to the increase in brown trout. There was an average of 636 trout 10 inches and longer per mile during the 6 year period prior to the restoration project, compared with 843 during the 4 years after the new channel was completed. Since the stream is also 1400 feet longer at Brewery Flats than before the project, the total number of 10-inch and larger trout in the entire section has increased impressively. However, the number of rainbow trout less than 10 inches long has declined substantially at Brewery Flats since the project was completed. Numbers of all sizes and species of trout have declined substantially in the section below the State trout hatchery since the late 1960s.

In December 2003, a “catch and release” regulation was implemented on Big Spring Creek upstream from the highway 191 bridge in Lewistown due to high PCB levels in fish. Lower Big Spring Creek has a one meal per month health advisory. A creel census completed on 6.5 miles of upper spring creek in 2003 (prior to the catch and release regulation) estimated that only 3% of trout caught by anglers were harvested.

### *BIG CASINO RESERVOIR*

The improvement in the rainbow fishery in Big Casino Reservoir due to removal of white suckers and stocking of walleye was short-lived. Yellow perch have taken over the reservoir since their illegal introduction in 2000. In 2004, rainbow trout caught during spring trapping declined by about 40% while yellow perch increased about 4 fold (400%) and white suckers increased by nearly 60%. Fall gill net catch in 2004 was dismal for rainbow trout. Stocking levels dropped by about 50% but only 3 rainbow trout were captured during fall gill netting compared with 35 in 2003. Furthermore, the 3 trout captured averaged 15.3 inches, but were very skinny. By 2004, yellow perch began to get skinny too. During spring trapping 3.7 walleye per trap night were captured and they weighed up to 8.5 pounds. Walleye catch rate during spring trapping was about 40% higher than in 2003. Only one walleye was captured during fall gill netting.

### EAST FORK RESERVOIR

The northern pike fishery continues to improve in East Fork Reservoir. During 2004, northern pike up to 8 pounds and yellow perch up to 1.3 pounds were captured. During spring trapping, average weight of northern pike was 2.2 pounds, a 0.75-pound increase since 2001. Mean total length of trapped northern pike (21.6 inches) is about 2 inches longer than in 2001. Spring trapping estimates of northern pike indicate fewer pike live in the reservoir compared with the last three years. Yellow perch numbers appear to be increasing but they averaged less than 6 inches long.

### OTHER PONDS

**Upper Carter Pond**, north of Lewistown, developed a leak in July 2004, apparently due to corrosion in the trickle tube. This popular pond lost most of its volume and drained to less than 10 feet deep. We are working with other local government agencies and the landowner to find funds and assistance to repair the structure.

The city of Lewistown has completed a cooperative project funded by FWP to dredge the **Frog Ponds**, an urban fishing area located within City limits. This city park now provides 2 adjacent ponds for fishing and is stocked with catchable rainbow trout.

### PALLID STURGEON RECOVERY

A small population of remnant wild adult pallid sturgeon exists in the Missouri River upriver from Fort Peck Reservoir. A stocking program was initiated in 1998 to protect the gene pool and begin to repopulate the species in this recovery area. A total of 750 yearling pallids were released in the 150-mile reach during 1998, another 2,063 yearlings released during 2002 and 3,000 during 2004. The fate of these three pallid sturgeon releases are still uncertain, however, observations dealing with the first release indicate these juvenile pallids are doing okay. Since 1999 we have captured 107 of the 750 juvenile pallids that were originally released. They are 8 years-old now and average 20.4 inches fork length and 0.98 pounds, similar to last year. Most of the juvenile pallids appear to be living in the Robinson Bridge area and shovelnose sturgeon anglers are reminded to pay close attention at sturgeon identification. The easiest way to separate the two species is to examine the length of the sturgeon's barbels ("whiskers") on the underside of the snout. The pallid's outer barbels are about twice the length of the inner ones, whereas the shovelnose barbels are all about the same length.

### SAUGER STATUS

Sauger have been receiving considerable attention by fisheries crews because of the sharp declines first reported during the late 1980's. For the 2003 fall electrofishing surveys, sauger numbers continue to show steady improvements. Abundance indices recorded were 3.5 fish/hr (f/h) at Morony, 4.1 f/h at Fort Benton, 7.1 f/hr at Coal Banks, 10.4 f/hr at Judith Landing and 13.8 f/h at Robinson Bridge. A catch rate of 10 f/h indicates that sauger numbers are fairly high in a given area. Sauger catch rates for the 2004 fall surveys have not been worked up yet, but they appear to be similar to 2003. No sauger fry were stocked in the system this year because of poor results with the river-side spawning operation. Also, annual fish population surveys indicate there was a complete lack of natural sauger reproduction in the river this year. So it appears the sauger population health in the river is still tenuous.

### CREEL SURVEY

A creel survey was conducted in the middle Missouri River during the period May – October, 2003. A total of 361 anglers were interviewed and they had fished for a total of 1,277 hours. The section with the greatest number of interviews (37%) occurred in the Robinson Bridge area and most interviews (44%) were conducted in the month of May. Generally, catch rates for game fish were found to be low. Goldeye was the most common species caught by anglers, averaging 0.25 fish/h. Channel catfish, the most common game fish caught, averaged 0.08 fish/h and the sauger rate averaged 0.05 fish/h. Interest in fishing the middle Missouri River has increased substantially over the past decade, especially in the upper section from the Marias River to Morony Dam (just below Great Falls), where fishing pressure has increased 210%.

### WESTSLOPE CUTTHROAT RESTORATION

The westslope cutthroat trout is the only native trout in the Missouri River drainage in northcentral Montana. However, genetically unaltered westslopes are now present in only about 3% of their original range in this area. These remnant populations are found only in small headwater streams where they are isolated from threats posed by competing non-native trout (brook trout and rainbows) and where there is little land and water development. To reverse the decline, the Cooperative Northcentral Montana Westslope Cutthroat Restoration Project, a joint venture between FWP and the US Forest Service, was initiated in 2002. This project completed transfers of fish from two pure westslope cutthroat trout (WCT) populations to new homes in other streams upstream of natural waterfall barriers during 2004. Fish transfers included East Fork Spring Creek (Judith River drainage) to North Fork Ford Creek (Sun River drainage) and an interbasin transfer of fish from a tributary of West Fork Cottonwood Creek (Judith drainage) to fishless water in Cottonwood Creek. These transfers of pure fish to empty habitats increase the miles of stream in northcentral Montana that hold pure WCT and help ensure that should a catastrophic event (e.g. fire, continued drought) occur in the donor stream, some genetically pure individuals may be preserved in the new stream section. Surveys completed in 2004 indicated that natural reproduction is occurring in streams that previously received donor fish, including Lonesome Creek (Two Medicine drainage) and Gold Run Creek (Belt Creek drainage). A survey of Petty Creek indicated previously transferred individuals had survived but no new recruitment had occurred. All old and new transfers of pure WCT will continue to be monitored for success.

Construction of barriers to non-native fishes is critical for protection and expansion of WCT populations. Non-native rainbow trout hybridize with native WCT and brook trout typically out-compete and wipe out populations of native WCT. A small remnant population of WCT was further protected by enhancement of a barrier previously (2002) blasted out of bedrock in Big Coulee Creek (Highwood Creek drainage). In 2004, additional blasting was done to make the barrier more effective at blocking larger non-native fish. A partial barrier was begun on Crawford Creek (Belt Creek drainage) in 2004. A rock chipper was used to remove bedrock and create a partial fish barrier. The Crawford barrier will be augmented in 2005 with the addition of a concrete sill. After completion, non-native fish in Crawford Creek will be removed and pure fish at the head of the drainage will recolonize the stream. This project will protect approximately 1.5 miles of stream currently inhabited by native WCT.

In addition, a culvert barrier was constructed on Middle Fork Little Belt Creek in the fall of 2004. The culvert barrier was a cooperative effort completed with the help of Lewis and Clark National Forest engineers. The culvert barrier will protect approximately 1.5 miles of stream inhabited by pure WCT from continued competition with brook trout. Partial design work (65%) was completed on the South Fork Judith River fish barrier. The barrier will protect native WCT in about 25 miles of the upper SF Judith and its tributaries from continued hybridization with non-native rainbow trout and competition with non-native brook trout.

Four years of electrofishing removal of brook trout above a barrier constructed on Cottonwood Creek (Arrow Creek drainage) looks promising; this year biologists found no brook trout and high numbers of juvenile and adult WCT. Brook trout suppression efforts continue in a few other small headwater streams in the Highwood and Little Belt Mountains. Suppression efforts are only a stopgap measure until barriers can be created to protect WCT from non-native brook trout. Genetics, abundance, and biomass of fishes were monitored in numerous small streams region wide.

Future work will include further expansion and protection of small isolated populations of westslope cutthroat trout. In addition, future work should focus on rehabilitation of medium sized drainages (more than 10 connected stream miles) and larger drainages where feasible. Creating and maintaining connectivity of small isolated populations is crucial to the long-term persistence of WCT in Montana.

## REGION FIVE - BILLINGS

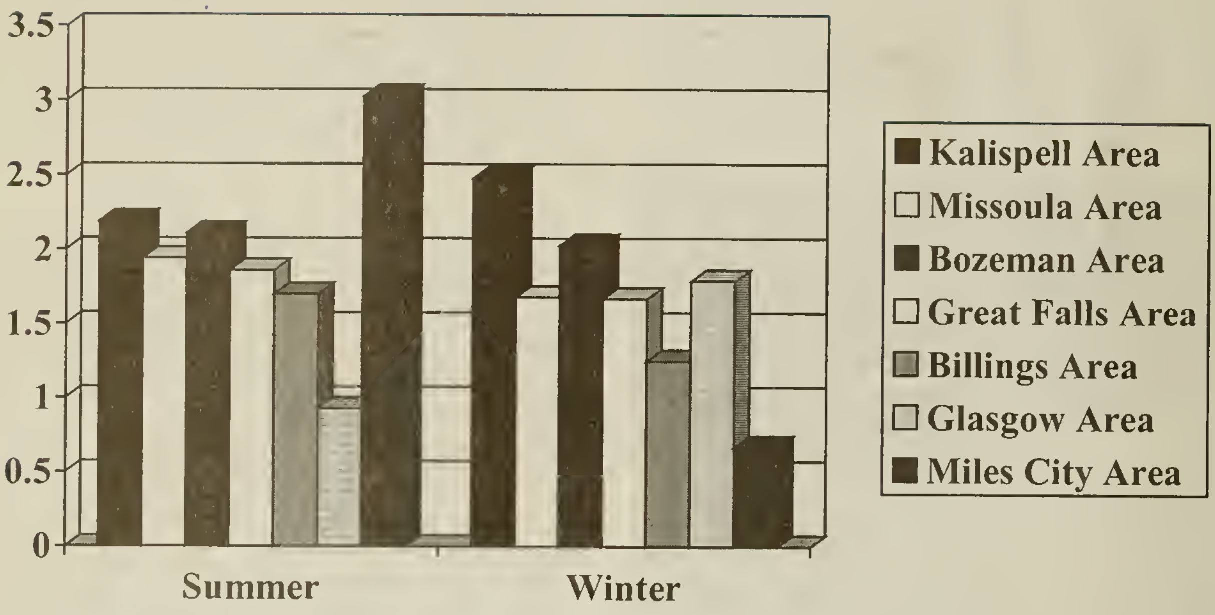
### *BIGHORN RIVER*

Drought continued to be the force driving most of the fisheries in Region 5 in 2004, and the Bighorn Drainage was one of the hardest hit. The Bighorn River is experiencing the worst drought conditions since FWP started managing the fishery in 1981.

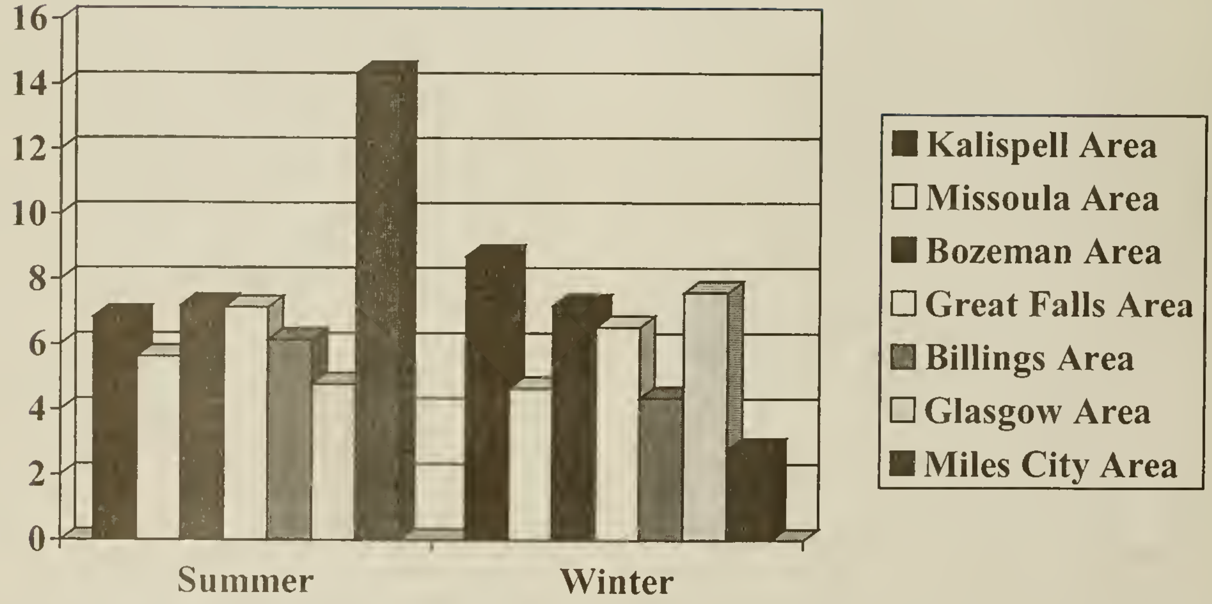
The Bureau of Reclamation (BOR) manages Yellowtail Dam and thus controls flows in the Bighorn River. The BOR has always strived to maintain the best flow conditions possible for the river fishery based on the amount of water available in the drainage and other mandated operating criteria. Under good water conditions, the BOR maintains river flows at or above 2,500 cfs. This flow level maintains most of the important side-channel areas along the river and helps maintain river trout populations near maximum levels for the water available. During drier times, the BOR still tries to maintain river flows above 2,000 cfs, which is the minimum target flow necessary to maintain a good fishery. Flow levels below 2,000 cfs start to seriously de-water key side-channel habitat. During serious drought conditions, the BOR operates the Bighorn River around a third flow level of 1,500 cfs, which has always been considered the absolute minimum flow acceptable for the Bighorn River.

Prior to the current ongoing drought, the worst drought impacts experienced in the Bighorn River were during 1988 and 1989, when river flows were below 2,000 cfs for almost 500 continuous days. River flows only dropped below 1,600 cfs for 45 continuous days, however, during this period. In 1994 – 1995, river flows dropped below 2,000 cfs for 320 continuous days and were below 1,600 cfs for 179 days.

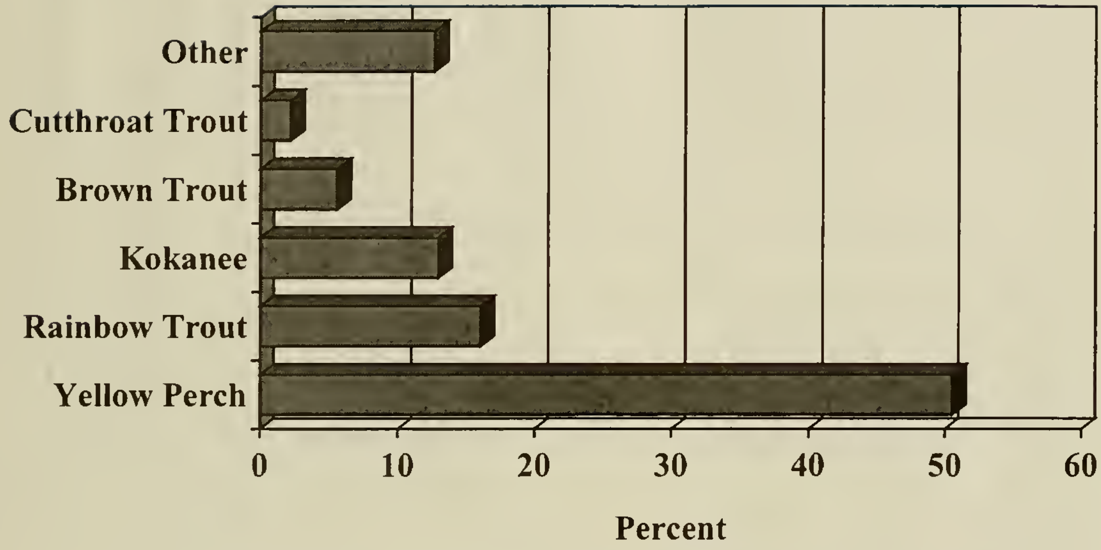
## Average Number of Fish Caught Per Hour
## 2003 Log Year



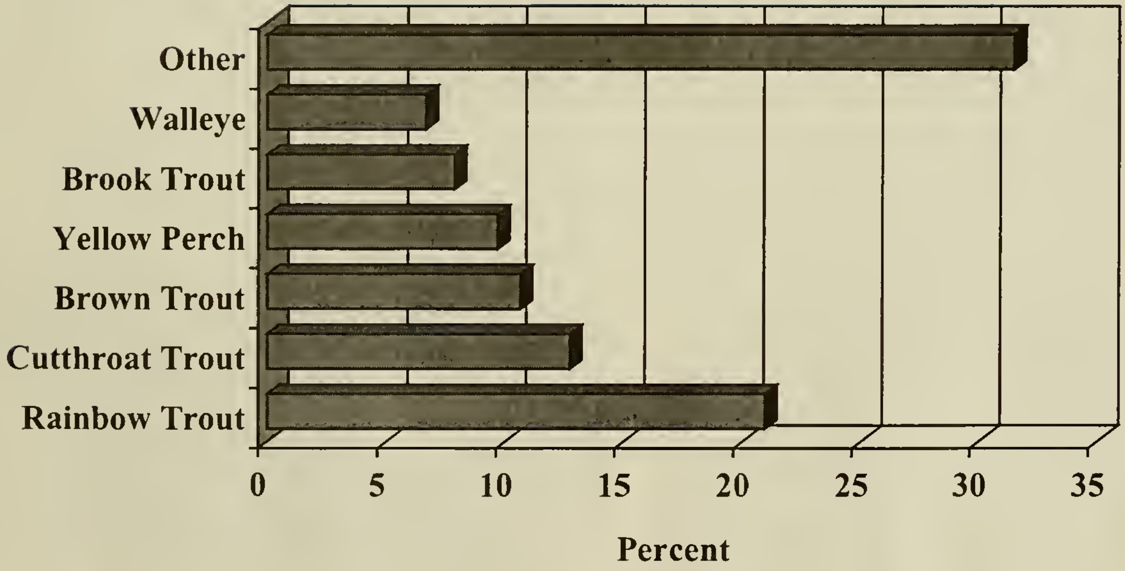
## Average Number of Fish Caught Per Day
## 2003 Log Year



## Statewide Top Game and Sport Fish
## December 2002 Through April 2003



## Statewide Top Game and Sport Fish
## May 2003 Through November 2003



As of October 1, 2004, Bighorn River flows have been below 2,000 cfs for 1,241 days and below 1,600 cfs for 1,103 days. On October 27, 2002, Bighorn flows were reduced below the absolute minimum fisheries flow of 1,500 cfs to only 1,300 cfs. The river remained at this operational level until June 8, 2003 (225 days), before coming back up to 1,500 cfs. River flows were again dropped to 1,300 cfs for 115 days between May 1 and mid-September 2004. Based on the most probable forecast from the BOR, river flows will remain at the absolute minimum flow of 1,500 cfs at least until spring runoff in 2005.

Flow levels have always been considered the single greatest factor controlling trout populations in the Bighorn River. Although the Bighorn is a more productive stream than most in Montana, a given volume of water can still only support a certain number of pounds of fish flesh over an extended period of time. During past low-water periods in the Bighorn, trout population levels have dropped and bottomed out about the time flow conditions returned to normal. As a result, population levels recovered fairly rapidly with improving flows.

The current period of low flows is different from any in the past. Both rainbow and brown trout populations in the upper Bighorn River started to decline in 1999 and continued to fall through 2003, with the cumulative impacts of the ongoing drought.

Preliminary analysis of Bighorn River fish population data collected in 2004 indicates both rainbow and brown trout populations are in a new transitional phase that should prove positive for the Bighorn fishery in the future. Predation by large trout on young-of-year (YOY) trout appears to be a major factor causing declining trout numbers during the ongoing drought. Since fall of 2001, a majority of the side-channel and shallow, shoreline rearing areas has been dewatered, forcing the small trout out into the main river channel with the large trout. Even though reproduction of both rainbows and brown trout has remained fairly strong through the drought, few of the resultant young fish have been recruiting into the Bighorn trout population. Numbers of 6 to 15 in rainbow and brown trout have been very low in the upper Bighorn every year since 2000. At the same time, condition factors (relative health) of the remaining large rainbow and brown trout have continued to improve each year, at least partially due to an increase of smaller trout in their diets. Numbers of age-one trout have been good enough to show reproduction was continuing, but too low to provide valid estimates. This pattern began to change in 2004. Preliminary estimates of two-year-old and older brown trout in the upper river were similar to the record low levels of around 500 brown trout per mile seen in 2003, but a very strong age-one year class backed up this population. According to preliminary estimates, the age-one brown trout population grew to over 2,600 per mile in the upper Bighorn during 2004. It appears that the larger, predatory brown and rainbow trout have decreased enough to allow much better survival of these small trout.

This same pattern was evident for rainbows. It has not been possible to calculate estimates for small rainbows in the upper Bighorn since 1999, and it was not possible to calculate any valid rainbow estimates for the past two years. The preliminary estimate for two-year-old and older rainbow trout in the upper Bighorn in 2004 was just over 500 per mile. Like brown trout, the rainbow population contained a very strong age-one year-class (about 2.300 per mile). Hopefully, these strong age-one year-classes will result in better recruitment of two-year-old fish into the population next year.

Age-one trout also dominated both rainbow and brown trout populations in the lower shocking section near Mallards Landing Fishing Access Site. Estimates have not yet been calculated for this section, but the brown trout population appeared to be further depressed from 2003 levels with fewer large brown trout captured. The rainbow population looked good with many 9 to 13 in age-one rainbows present. The good numbers of YOY rainbow and brown trout captured indicates reproduction was again successful. Hopefully, with reduced numbers of large trout, more of these small fish will be recruited into the population next year. Even though overall trout numbers have been severely depressed in the Bighorn by ongoing low flows, changing trends in the trout populations should help this fishery recover and rebuild more rapidly once flows return to normal.

New Zealand mud snails were first documented in the Bighorn River just below the Afterbay Dam in September 2002 at very low numbers. They did not seem to expand much in 2003, but they are now multiplying and spreading rapidly in the Bighorn. Mud snails have been reported at least as far downstream as Two Leggins Fishing Access Site this summer. This invader could become another factor the Bighorn trout populations have to contend with in the future.

### *BOULDER RIVER DRAINAGE*

Our monitoring on the Boulder River during 2004 suggested that, despite low water levels, the fish population in the river is doing well. Similar to other freestone rivers in the area, the drought seems to be leading to an increase in rainbow numbers while the brown trout hold steady. The increase in rainbow numbers has been evident in most age classes of fish, but the larger fish (> 10 in) in particular have shown a substantial increase, leading to greater angler opportunities on the Boulder. More than 400 fish were tagged near the Boulder Forks Fishing Access Site. Several of these fish have since been caught by anglers, and the returned tags provided valuable information on fish movements and growth rates.

Fish spawning surveys were performed in the spring (rainbow trout) and fall (brown trout) in the area just below Natural Bridge. The use of this spawning area by resident fish in the Boulder River and migratory fish in the Yellowstone River was confirmed this spring through the tagging study. Fish from the Boulder had blue tags while fish from the Yellowstone had yellow tags. Both

blue- and yellow-tagged fish were observed in the Boulder at Beaver Meadows during spawning surveys.
Plans are moving forward to install a fish screen on the Lamp-Nelson Ditch on the Boulder River between 8-mile bridge and Big Timber. The screen is scheduled to be installed before the next irrigation season. Further funding was obtained to develop stock water facilities to replace the ditch as a source of water for livestock after the irrigation season. Another fish rescue was performed in 2004 in the ditch, and 406 rainbow and brown trout were returned to the river, including one 21.2-in rainbow and several other fish over 15 in. Also, a tagged fish was captured in the ditch. This fish had moved approximately 8 miles downstream before it entered in the ditch.

### *STILLWATER DRAINAGE*

No population estimates were performed in the main Stillwater River during 2004. However, relatively good flows in the river and a cool summer led to excellent fishing on the river all summer. Fish have also been tagged in the Stillwater River, and there have been substantially more tag returns from the Stillwater than the Boulder, which is probably reflective of greater fishing pressure on the Stillwater. One 14-in rainbow tagged via angling was captured again the following day by another angler who also released the fish and reported the tag.

The Yellowstone cutthroat trout restoration project in Bad Canyon Creek appears to be a success. Approximately three miles of stream were poisoned two years ago. Prior to treatment, 21 of the remnant cutthroat trout in the creek were captured and held in freshwater during the poisoning. The fish were released back into the creek after the project, and supplemental stocking occurred last week. Monitoring during 2004 suggested that the fish have successfully spawned during 2003 and 2004, as age-one and age-zero fish were present in the stream in addition to the stocked fish. No brown trout have been found since treatment. The creek will be planted again this fall with another age-class of fish.

As a participant in the relicensing process for Mystic Lake Dam, FWP worked with Pennsylvania Power and Light Montana to survey three sections of West Rosebud Creek between West Rosebud Lake and Mystic Lake. Rainbow trout is the predominant fish species present in the creek, and the population between the lakes appears to be healthy and abundant. The fish population estimate for this reach of stream was slightly over 5,000 fish per mile. Although the fish are abundant, anglers should not expect to catch a wall-hanger in this part of the stream; the largest fish captured was about 9 in. Another section of the creek was surveyed downstream from the Pine Grove Campground. In this section, brown trout is the dominant fish species with a few rainbows and whitefish. The fish population through this section is not abundant, but there are some nice fish in the creek. The population estimate has not yet been calculated, but the numbers and size of fish relative to previous estimates suggests the population has changed little since the last sampling.

### *YELLOWSTONE RIVER*

During 2004 electrofishing surveys, fish were tagged in the Yellowstone River in the vicinity of Laurel, Reed Point, Greycliff, and Big Timber. One 14-in brown trout tagged near Laurel in March was caught by an angler in West Rosebud Creek near the town of Fishtail in July. The fish had moved over 50 miles over the course of the summer. The movement was not related to spawning because brown trout do not spawn until fall, so perhaps the fish was searching for prey or cooler waters. This movement emphasizes how important it is to have river systems that are interconnected and not obstructed by dams. The survey also revealed that there is a very abundant crop of 8-12 in rainbows in the river, in addition to the older, larger age-classes of fish. The presence of sub-adults is very positive in the Yellowstone because it indicates that good fishing should continue into the future.

A Yellowstone cutthroat trout restoration project was performed in the headwaters of Soda Butte Creek near Cooke City. The brook trout population in the creek has been rapidly expanding over the past 5 years, and brook trout were found downstream in Yellowstone National Park for the first time in the fall of 2003. Over 700 brook trout were chemically removed from a small tributary to Soda Butte Creek, which appears to be the source of these fish. In the main creek, electrofishing was used to remove brook trout without harming cutthroat trout. About 300 brook trout were removed from Cooke City to the Yellowstone National Park boundary. The majority of the brook trout population downstream of Cooke City was found near confluence of Sheep Creek. It will take several years of intensive electrofishing to remove brook trout from this reach of stream. Despite the growing brook trout population, the Yellowstone cutthroat population in the creek appears to be very healthy.

Low flow conditions continued to limit our ability to safely sample the Yellowstone River around Billings. Two days of electrofishing near Billings in late April and early May captured numerous Yellowstone cutthroat and rainbow trout, as well as a few brown trout. The largest Yellowstone cutthroat captured was 9.6 in long, so it appeared all of the cutthroats sampled were part of the 65,000 stocked near Billings this spring. Anglers reported catching many of these small, stocked cutthroats in the spring and early summer. We received only one report from and angler who caught a 16in cutthroat near Laurel late in the summer, along with a several 10 to 12 in cutthroats. This 16 in fish was probably a carry-over from a previous plant. The largest rainbow netted during this spring electrofishing was 16.1 in long and weighed 1.38 lb. The largest brown trout was 19.0 in and weighed 2.36 lb. All of the trout netted were in good condition, indicating they were finding plenty of food in this section of the Yellowstone.

The Yellowstone cutthroat plants near Billings will unfortunately be one of the casualties of the PCB problem at the Big Springs Hatchery near Lewistown. Each Region is cutting back stocking requests by about 1/3 until the hatchery is fully functional again. It may be possible to reinstate this plant some time in the future, if hatchery space becomes available and water levels improve in the Yellowstone. The only sampling conducted on the lower Yellowstone River below Billings this season was to collect sauger for genetic analysis. Only one 16.7 in sauger was collected.

### *MUSSELSHELL RIVER*

The brown trout population in the upper Musselshell River continued to persist despite ongoing drought flows. Two days of electrofishing in the spring of 2004 in the standard electrofishing section near Selkirk Fishing Access Site caught 107 brown trout, down slightly from the 2003 catch and down 25 % from the 2002 catch. The brown trout population seems to slide a little lower each year with the ongoing drought. Strong age-one year-classes were observed in this section of the Musselshell in both 2002 and 2003, indicating the remaining brown trout were still successfully reproducing. In 2004 48 % of the brown trout handled were less than 6in long, but there was also a better representation of 6 to 15 in brown trout in the population than has been seen in recent years. Similar to the Bighorn River fishery, numbers of larger, predatory brown trout may be declining enough to allow better recruitment of yearling trout into the population. The Musselshell River has always produced some nice brown trout, and this year was no exception. Ten of the brown trout handled were over 19 in long, with the largest trout measuring 21.5 in and weighing 3.52 lb.

Water commissioners were again regulating irrigation withdrawals from the Musselshell River this summer. This control, along with better timing of limited rainfall, helped sustain river levels better than in 2002 and 2003. The Musselshell River definitely needs a good high spring flush to mobilize accumulated sediment and help clean spawning gravel so the remaining brown trout population can survive until flow conditions improve. We are currently working with the City of Harlowton to develop a new fishing access site on the Musselshell River near town.

### *CLARKS FORK YELLOWSTONE RIVER*

Whirling disease was confirmed in the Clarks Fork of the Yellowstone River during the fall of 2003. Sentinel cages of fish were incubated in the river during October 2003 at three locations downstream of the Montana-Wyoming border. Wyoming had confirmed the disease in the river farther upstream earlier in the year. This is the first confirmed case of whirling disease in Region 5. Twelve additional cages were placed in the Clarks Fork and tributaries this fall to monitor the spread of the disease. Additional cages were placed in the Yellowstone River near Billings, Park City, Columbus, Reed Point and Big Timber to test for the presence of the disease in the main river. Whirling disease has been found in the Yellowstone upstream of Livingston, but has never been detected in fish sent in from the Region 5 section of the river. The Boulder and Stillwater River were also tested for the disease. Results from this falls testing will not be available until later this winter.

A fish passage project is slated to be completed next spring on Clear Creek, a tributary to Rock Creek (tributary to the Clarks Fork) near Roberts. A box culvert located about 150 yards upstream from the confluence of Rock Creek has become perched approximately 3 ft above the current streambed. Working with the US Fish and Wildlife Service, Carbon County, and the local landowner, we have obtained funds to reconstruct the streambed downstream from the culvert to create a step-pool configuration that will restore passage at the site.

### *BIGHORN LAKE*

Water levels in Bighorn Lake dropped to within about two feet of the bottom of the boat ramps at Barry's Landing and Ok-a-Beh before releases into the Bighorn River were dropped to 1,300 cfs on May 1. Thereafter, water levels climbed slowly, keeping both ramps open all summer. The concessionaire did not open the marina at Ok-a-Beh, so no gas or docks were available on Bighorn Lake this season. Angling success remained poor on the lake again this summer, especially for walleyes.

Electrofishing near Ok-a-Beh in April captured several immature walleyes, but very few larger fish. The largest walleye netted was a 27 in female that weighed 8.0 lb. We netted a large number of smallmouth bass up to 14.5 in long. Smallmouth bass was the main fish species caught by anglers in Bighorn Lake this summer.

Sampling in the lake during spring and summer reinforced angler complaints about the lack of walleyes. Twelve gill nets set in early June (six in the upper reservoir near Barry's landing and six in the lower reservoir) caught an average of only 1.5 walleyes per net. Most of these fish were between 9 and 15 in long, with only two larger walleyes netted. The largest walleye captured was 25.2 in long and weighed 4.60 lb. Six additional nets set throughout the lake in July in conjunction with a BOR fisheries study only caught five small walleyes. The largest fish captured in these nets was a 7.40-lb channel catfish. Another interesting catch was a 25.9 in shovelnose sturgeon netted in the mouth of Dry Head Canyon. This was the first sturgeon netted in the lake since Wyoming began stocking them in the Big Horn River above the lake.

Bighorn Lake received a normal plant of 4 million walleye fry and 200,000 fingerlings in 2004. This was the same number of walleye that has been stocked into the lake each year since the drought started. Lack of other forage species in the lake, resulting from several years of low water exposing the shallow, vegetated lake margins, may be increasing predation on these stocked walleye, especially by the growing smallmouth bass population. Predation, combined with overall lower productivity resulting from low lake levels, appears to be having a cumulative impact on the Bighorn Lake fishery. A return to normal lake levels will be needed before this fishery can really start to recover.

### *COONEY RESERVOIR*

The walleyes in Cooney Reservoir appear to be doing quite well. Despite the reduction in stocking rate three years ago, no substantial decline in walleye numbers have been detected during annual sampling. During 2002 and 2003, fewer crayfish were found in our gill nets in the fall. This decline was of concern because the diets of juvenile and adult walleyes in the reservoir are, at times, exclusively crayfish. Crayfish numbers appeared to increase during 2004, and many smaller crayfish were present in the nets. The white- and longnose-sucker populations, the walleyes' primary fish prey, also appear to be relatively stable, with longnose suckers apparently increasing. The heavy predation on the suckers by walleyes has led to a population of suckers that is primarily larger than 12 in. As the stocking rate of walleyes increases, the long-term trend is for the average size of suckers to increase. Since the reduction in stocking rate from 100,000 to 60,000 three years ago, the average size of suckers has declined slightly in the reservoir. The increase in longnose suckers in the reservoir may be related to an influx of larger suckers from Red Lodge and Willow Creek upstream. Fewer large walleye (> 10 lb) were captured this spring, suggesting that some of the older fish may be aging out. Reducing the stocking rate for walleyes, and allowing some recruitment of suckers, should increase growth of larger walleyes in the long run.

Approximately 350 walleyes 12 in and greater were tagged in the reservoir this spring, and anglers have returned over 30 of these tags. The data from these tagged fish suggest that fish growth from March through the summer is relatively slow. The data also suggest that that few anglers release walleyes in the reservoir.

The rainbow trout in Cooney are not fairing as well as the walleyes in recent years. Although our stocking rate has increased, and there does not appear to be any change in the walleye population, the survival of rainbow trout stocked in the spring has been very poor the last two years. In 2004 over 200,000 4-5 in rainbows were stocked in the reservoir and, among 6 gill nets, not one of this year's stocked fish was captured. There are a few really large rainbows in the lake from previous plants, but the yearling fish that grow from 5 in at stocking to about 13 in and one pound by fall, have all but disappeared from the reservoir. To determine the fate of all the fish stocked, FWP will be conducting a creel survey on the reservoir starting in April 2005. In conjunction with the creel survey, we will also study walleyes are the main source of predation on the stocked rainbows, or if other factors, such as angler harvest or possibly bird predation, are the cause of the high mortality. So if you plan on fishing at Cooney in 2005, please participate in the creel survey and watch for tagged walleyes!

### *DEADMANS BASIN RESERVOIR*

Deadmans Basin continued to suffer from the drought conditions in the Musselshell Drainage. For the fourth year in row, water storage in Deadmans was drawn down to 9,000 acre-feet by the end of the irrigation season, or about 12 % of capacity. Fortunately, this volume of water still maintains about 17 to 20 ft of water in the deepest part of the lake. This water level, combined with winter inflows as the water users try and fill the Basin, has helped keep the Deadmans fishery alive through the drought.

Tiger muskies were first stocked into Deadmans in 1998, with additional plants in 1999 and 2000, in an effort to reduce sucker numbers and improve a poor trout and kokanee fishery. These tiger muskies seem to be doing what they were supposed to, maybe even a little too well with the ongoing drought. Netting results showed impacts on the white sucker population in Deadmans as early as 2000. The first years of netting results showed a decline in sucker numbers accompanied by an increase in average size of the remaining suckers, as the tiger muskies ate most of the smaller suckers in the lake. By the fall of 2003, these tiger muskies large enough to feed on even the largest suckers in the lake. Six gill nets set in the fall of 2003 caught only 13 white suckers longer than 5in, compared to several hundred suckers in the same net sets in the past. For the first time in a long while, a strong year-class of 3.5 to 5 in white suckers was trap-netted in the fall of 2003. These small suckers were an indication their numbers were getting low enough in the lake to trigger increased spawning to rebuild the population.

Six gill nets and three trap nets set in the spring in 2004 caught a total of 100 white suckers, with most between 8 and 17 in. Most of these fish were captured in trap nets as they cruised the lakeshore getting ready to spawn. This catch showed there were still some larger suckers left in the lake to reproduce and to provide food for the larger tiger muskies. Six gill nets and three trap nets set in Deadmans in the fall of 2004 only captured six white suckers between 14 and 16 in, along with a strong group between 6in and 9in. No tiger muskies were available to

plant into Deadmans Basin in 2004. This new plant was intended to prey upon the smaller suckers.
Both the rainbow and kokanee fisheries in Deadmans continued to respond favorably to the tiger-muskie program. Six gill nets set into Deadmans Basin in the spring of 2004 caught an average of 24 rainbows per net, with fish ranging from 10 to 18 in. Normally, spring netting in Deadmans produces good catches of rainbows with few kokanee, while fall netting concentrates on kokanee. This year, fall netting caught a total of 85 rainbows. Just under half of these were fish planted in the spring. The rest were larger, carry-over fish from previous years. These larger rainbows ranged from 11.1 to 17.6 in with most of them between 12 and 15 in.

Kokanee catch-rates were down in the fall of 2003, but the 2003 kokanee made a strong showing in the 2004 spring nets as 6.0 to 11.5 in fish. The kokanee population continued to look very strong in the fall of 2004, with an average catch of 36 kokanee per net in both trap and gill nets. The fall sample included a good representation from the spring plant plus a very strong year-class from the 2003 plant. Mature kokanee ranged from 11.5 in to over 18 in. The largest kokanee netted was a mature male 18.2 in long and weighing 1.58 lb.

Four tiger muskies were captured in the nets in 2004, three in the spring and one in the fall. The spring fish ranged from 35.0 to 38.5 in and the largest one weighed 17.5 lb. A 39.0-in tiger muskie caught and released from a net in the fall weighed 16.0 lb.

The past few years, both rainbow and kokanee plants into Deadmans Basin had been reduced by half due to low water conditions. Stocking requests in 2004 were increased to three quarters of the normal plant, or 75,000 kokanee and 150,000 rainbows. Plans are to plant a limited number of tiger muskies into Deadmans next year to add a new year-class and to provide smaller fish that can start working on the smaller suckers in the lake.

Angler pressure has been on the rise at Deadmans along with the rainbow trout population, even though low water conditions have hampered boat access. Both bank and boat anglers have been having good success with many nice stringers of fish being taken home. The number of anglers coming to Deadmans to fish specifically for tiger muskies has also been increasing significantly. The *Billings Gazette* had a picture of an angler who caught a 45-in, 25-lb tiger muskie from Deadmans late this summer. There are undoubtedly more fish of this size in Deadmans waiting for anglers willing to put in enough time to tempt them with the right lure. It appears that all Deadmans needs now to become one of the best fishing opportunities in Region 5 is More Water!!

### ABSAROKA-BEARTOOTH LAKES AND STREAMS

A new source for wild Yellowstone cutthroat trout eggs was sampled during July of 2004. Approximately 90 females and 120 males were collected and spawned from Goose Lake at the upper end of the Stillwater River drainage. The fish were tested for diseases and for genetic purity and will likely serve as the source of wild fish gametes in the future. This stock of fish will replace or supplement the current stock from McBride Lake in Yellowstone National Park. The fish will eventually be stocked into previously planted lakes throughout the Absaroka-Beartooth Mountains. FWP's high-mountain-lake fisheries crew sampled an additional 32 lakes over the summer from the Clarks Fork, Boulder, Stillwater, and West Rosebud drainages. The primary objective of the lake surveys is to monitor the fisheries in both self-sustaining and stocked lakes to determine fish health and to decide whether stocking rates should be modified. Interns form half of the four-person crew that surveys the lakes from July to the end of August, providing a great opportunity for college students interested in the fisheries field to gain valuable experience.

### LAUREL POND

Laurel Pond is one of only a few ponds that provide angling opportunities close to an urban area. It is stocked with catchable-sized rainbow trout several times during the year and provides an excellent opportunity for families and youngsters to get out and enjoy an afternoon of fishing. The aerators purchased by the Billings Chapter of Walleyes Unlimited and Pikemasters have proven very effective at reducing fish kills during the fall and winter. The pond was netted this spring before stocking, and a substantial number of fish were captured in the nets that had successfully over-wintered. With the netting, the presence of illegally introduced goldfish in the pond was also confirmed.

### WEST ROSEBUD LAKE

West Rosebud Lake was sampled this fall. Fewer brook trout were captured than during sampling in 2003. Brown trout numbers appear to be similar to previous years' sampling, but the average size was smaller. This reduced size may be related to spawning movements of adults in the fall from the lake to the stream where suitable gravels are present for spawning. Therefore, the spawners were not part of the sample. Some of the fish captured were analyzed for PCB's. The results of this testing suggested that there are no detectible PCB's in brown trout, mountain whitefish and longnose suckers from the lake.

### LAKE ELMO

Anglers of all ages continued to put pressure on the stocked rainbow population in Lake Elmo this summer. Most anglers were rewarded with some nice fish if they put in any effort at all. Lake Elmo received the normal requested plant of 9,600 catchable-sized rainbows, split between spring and fall plants, again this year. Sizes of some of the rainbows captured in gill nets set in lake Elmo in late May indicated there was good carry-over from the 2003 fall plant.
Both yellow perch and crappie numbers remained low in Lake Elmo this summer. Only six perch, ranging up to 6.6 in long, and no crappies were captured in spring nets. Anglers caught a few perch, but no crappies were reported for the summer. The low lake level experienced

during the winter of 2002 – 2003 appears to have impacted these fish populations.

Lake Elmo received the normal plant of 7,800 small channel catfish in 2004. No channel catfish were collected during spring netting in 2004, but anglers continued to catch some nice catfish from the lake. One angler brought a 13.8 lb catfish from Lake Elmo into the office to be weighed this summer. There are probably bigger fish than that still in the lake.

White suckers are normally the most common fish species captured in trap and gill nets in Lake Elmo each year. Longnose and shorthead-redhorse suckers are also captured in most net sets. All of these suckers compete directly with rainbows and other game fish for the limited food supply available in Lake Elmo. An EA was initiated this spring to evaluate the potential of stocking tiger muskies into Lake Elmo (and also Lake Josephine) to reduce sucker numbers and increase growth rates for other fish in these lakes. The Miles City Fish Hatchery did not have enough tiger muskies available for these plants this summer, so the EA was not completed, but plans are to complete it this winter and hopefully stock some tiger muskies next summer. The number of tiger muskies planted would be small, but they could still provide a limited trophy fishery and would add to the excitement of fishing both lakes.

## REGION SIX - GLASGOW

### *FORT PECK RESERVOIR*

The drought continued through 2004, reducing the lake elevation by nine additional feet from the previous year. A declining pool translates into a reduction in fish habitat in general, and more specifically, a loss of submerged vegetation for fish spawning and cover. Currently many fish species such as northern pike and yellow perch are experiencing record, or near record lows in recruitment.

Walleye recruitment has been on the decline as well, but is not as severe due to annual stocking.

As the water levels have declined over the years the area where spawning walleye concentrate has been moving steadily down the Big Dry Arm. Accessing the area where walleye congregate has been a challenge in recent years, as fish are displaced further and further from boat ramps. Despite the logistical challenges this represents, the spawning crew and a dedicated group of volunteers have been very successful at capturing fish and collecting eggs. This spring over 3,000 walleye spawners were captured and released, with 88 million eggs collected, fertilized and transported to Miles City Hatchery. During spring trapping over 2,500 northern pike were also captured and released. Some of these fish were spawned to help augment declining natural reproduction of this population. (If you would like to participate in the Ft. Peck volunteer walleye egg-take effort in April 2005, call 406-526-3471).

The end result of the spring walleye spawning activity resulted in other Montana walleye waters were being stocked with fry and fingerlings, with Ft. Peck receiving the lion's share. Over 30 million fry and 1.6 million fingerlings were planted in Ft. Peck in 2004. The planned goal of 2.0 million fingerling was not achieved due to cool spring weather, which negatively affected pond rearing.

This year's annual gill net survey indicates a strong population of larger walleye, with a steady but diminishing number of small walleye through the recent drought. Reduced numbers of small walleyes is of concern in that it will ultimately result in fewer larger fish for future anglers. The population composition for northern pike is following a similar downward trend, but to a much greater extent, as only 2% of the pike being caught were less than 24 inches. The one bright spot on the horizon is that ounce significant spring raises resume, these large adults should be able to produce huge numbers of young.

Annual seining surveys in 2004 indicate a mixed bag for key forage fish species. Spottail shiners maintained good production, unlike 2003. Emerald shiners appear to be holding their own, but the abundance of young-of-year yellow perch and crappie continues to be marginal. Unlike some of the other gamefish species in the reservoir, smallmouth bass appear to be reproducing successfully through the drought; this anomaly is attributed to its summer spawn, when reservoir water levels are more stable.

Evaluation of cisco young-of-year production in 2004 indicated a better than average spawn, with 31 fish caught per net. This was an improvement over 2003 and 2002, when nets average only 3 and 6 fish per net, respectively. The catch rate in 2001 was the best in recent years, when the average catch rate was 251 fish per net. Because of its abundance, the 2001 year-class continues to dominate the reservoir cisco population, but due to an average size of 9 inches, small predator fish cannot utilize them.

The chinook salmon program continues to be plagued by poor returns despite doubling the numbers stocked and tripling the total weight of stocks. The cause of poor return to the creel in recent years is currently unknown. However, we are aware that due to the extended drought and declining lake levels the abundance of forage fish populations has dropped. As a result, survival of stocked chinook salmon fingerlings released into Ft. Peck are likely more vulnerable to larger predators due to reduced forage fish and also to lack of suitable forage for their own growth. Another potential negative impact on chinook salmon survival, may involve rearing of salmon at Giant Springs Hatchery. This facility is upriver from Ft. Peck, and might draw salmon upstream as they attempt to "home-in" on this unique area. As these fish leave the reservoir and mover upstream they become more vulnerable to predator fish residing in the Missouri.

In June 2004, nearly 180,000 chinook salmon were reared in pens and released into Ft. Peck A fall plant of 13,600 larger salmon was also released by Mike Ruggles, reservoir biologist, in an effort to address the possible high predation by gamefish. Chinook salmon adults did not return to Ft. Peck Marina in adequate numbers to spawn in fall 2004. Eggs were sought and provided by the North Dakota Fish and Game. Since hatchery space for salmon was extremely limited in Montana this fall, South Dakota hatchery personnel offered to rear salmon for stocking Ft. Peck in 2005.

Lake trout were successfully captured and spawned in Ft. Peck in fall 2003, with 27,900 fingerlings stocked in spring 2004. The continuing decline in the reservoir's water level has dewatered nearly 85% of known spawning habitat on the dam. This will result in continued negative impacts to natural reproduction of lake trout, which can only be counteracted with intensified artificial propagation efforts. Unfortunately, even if lake trout eggs were taken, there is currently no room in Montana's hatchery system to hatch and rear these fish. Once completed, the new Ft. Peck Hatchery will not be available to assist with this problem as certain angler groups appose production of lake trout in this facility. If authorization cannot be realized in the very near future, anglers who enjoy fishing for lake trout may have little to look forward to.

### *BAILEY RESERVOIR*

Water levels were dangerously low in fall 2003 and a winterkill loomed ominously over the reservoir in early 2004. The reservoir is currently full and spring trap netting resulted in catches of numerous adult black crappie, however yellow perch numbers were limited. In the fall 2004, approximately 20,000 four-inch rainbow trout will be stocked.

### *BEAVER CREEK RESERVOIR*

Beaver Creek Reservoir is currently full and yellow perch took full advantage of the available flooded spawning substrate this spring. Good catches of perch and trout were made throughout most of the year. Walleye fishermen are learning how to catch the chunky fish with regularity. Smallmouth bass are providing a great deal of enjoyment. The northern pike population has been depressed for several years and has allowed for a resurgence of the trout fishery. However pike production in 2003 was great, and we caught multiple 20 to 34 inch northern pike during fall sampling. Huge crowds from around the state are expected to turn out for the winter perch fishing. Trout fishing will be outstanding this winter. This reservoir now receives the fourth highest fishing pressure in the region.

### *BEAR PAW LAKE*

The long-term sucker reduction program is beginning to pay dividends. Growth and condition of stocked rainbow and cutthroat trout has improved substantially and the lake is once again a final destination point for thousands of fishermen. The reservoir ranks number four in fishing pressure in Region Six. Increased fishing pressure on this body of water instigated a reduction in the trout limit from 5 to 3, which went into affect in March of 2002. The reservoir is currently full and many upgrades to the site were done in the last year with more planned. The reservoir is home to rainbow trout (9 to 11 inch), Yellowstone cutthroat trout, brook trout, walleye (18 to 22 inches: illegally introduced in 1985), smallmouth bass, and white suckers.

### *COW CREEK RESERVOIR*

This reservoir was one of the few unaffected by the drought and the reservoir is currently full. Catches of walleye and channel catfish remain good and tiger muskies are being caught regularly. Though travel to this reservoir requires travel over miles of gravel roads, this reservoir is a wonderful destination to fish for some unique species. Those who have traveled the extra distance have reported catches of nine-pound channel catfish. Fishermen should note that the minimum size limit for muskies was increased to 40 inches.

### *DRY FORK RESERVOIR*

Abundant rains in 2004 have allowed the water levels to increase and remain stable going into the winter. And the fishery appears to be recovering from previous years of extreme drought, which resulted in the reservoir going completely dry. With the reservoir near full, there have been numerous reports of 20-inch northern pike, 16 to 24 inch rainbow trout, and half-pound perch being caught. Walleye (5,000, two-inch) were reintroduced in 2004 and 13, 200 rainbow trout were stocked into the reservoir this spring. An additional 7,400 6-inch rainbow will be stocked this fall to substitute for reduced hatchery stockings in 2005 as a result of Lewistown hatchery being "mothballed".

### *FABER RESERVOIR*

The condition of rainbow trout continues to be good after the reservoir was rehabilitated in 2000 to remove white suckers. Reports of high catch rates continue, with many 13 to 15 inch rainbow trout and the occasional four-pound rainbow trout being caught. Water levels within the reservoir remain stable and 10,000 three-inch rainbow trout were stocked into the reservoir in 2004. Winter fishing should be great. An additional 10,000 rainbow trout will be stocked this fall to substitute for reduced plants from the Lewistown hatchery, which will be "mothballed" for the 2005 season.

### *FRESNO RESERVOIR AND TAILWATER FAS*

Spring and summer rains allowed reservoir elevations to increase, flooding shoreline vegetation, which provided spawning substrate for various forage fish species. Yellow perch were one of the species that benefited, showing a 64% increase in young-of- year production over 2003 seining results.

One hundred thousand walleye fingerling were stocked in early summer to augment poor natural walleye production in recent years. Fall netting in 2004 indicates that walleye abundance remains low, with catch consistent with catch rates over the past four years. Catch is still down from record highs in the 1990's due to poor recruitment. However, walleye present in Fresno reservoir are very healthy and exhibit high condition indices. Twenty to twenty-five-inch walleye, weighing 4 to 5 pounds are not uncommon catches within the reservoir. The high condition is contributed to the increased ratio of forage fish to predators.

Lake whitefish (8 to 23 inches) continue to have the highest catch rate during fall netting. Northern pike catch declined slightly from 2003, however it continues to be the highest seen since the mid- 1990s.

Walleye and pike fishing below the dam at the Tailwater Fishing Access Site has been very good, however, fishermen should be aware that the Bureau of Reclamation has closed the favorite fishing area immediately below the dam due to Homeland Security concerns.

### *GRASSHOPPER RESERVOIR*

Water levels are currently high and the rainbow trout are thriving. Fisherman report catches of 5-pound rainbow trout, and 14 to 18 inch rainbow trout are common throughout the reservoir. An additional 2,000, two to four inch rainbow trout were stocked in the spring of 2004.

### *H.C. KUHR RESERVOIR*

In 2003 the drought all but dewatered this fine trout fishery. FWP seized the opportunity to kill off a remnant perch and sucker population, which would compete with trout for forage. The reservoir was restocked with fingerling trout in 2003 and closed to fishing to allow fish to attain an acceptable size. The fishery reopened in 2004, and there have been reports of 3 to 4 pound rainbow trout being caught by anglers. The reservoir is currently full, and an additional 3,000 3 to 4 inch rainbow trout were stocked this spring.

### *LITTLE WARM RESERVOIR*

The reservoir regained some volume this year and is almost full. Anglers have reported good catches of tiger muskies this year. In June, 10,000 walleye and 2,500 tiger musky were stocked into the reservoir. Fishermen should note that the minimum legal size limit for muskies has increase to 40 inches. To improve fishing access, FWP, with the help of landowner Steve Knudsen, installed a much needed boat ramp from a World War II Air Force landing mat in 2003, and a cattle guard was installed at the entrance in 2004.

### *MISSOURI RIVER PADDLEFISH ABOVE FORT PECK*

This was the seventh consecutive year of low spring flows, which meant paddlefish did not reach the spawning grounds, resulting in no significant recruitment of paddlefish. However, snaggers did very well as adult paddlefish congregated near Fred Robinson Bridge. FWP is continuing to tag paddlefish and encourage anglers to return tags with information on location and size at harvest to the Havre Area Resource Office. This information allows biologists to determine survival, harvest, and growth rates of paddlefish in the Missouri.

### *NELSON RESERVOIR*

Though also affected by the long drought, Nelson Reservoir has fared better than Fresno in maintaining its fishery. The percentage of dead storage is significantly higher than that at Fresno and off-stream storage reduces turbidity levels. Good catches have been reported throughout the year on black crappie (5 to 9 inches), goldeye (10 to 15 inches), lake whitefish (15 to 23 inches), northern pike (24 to 31 inches), and walleye (9 to 27 inches). Walleye production remains low and as a result 100,000 young of year walleye were stocked into the reservoir. Yellow perch and other forage fish production has substantially increased this year as a result of increased flooded vegetation, which provided spawning habitat. Walleye growth and condition are expected to increase in response to the increase in available forage.

### *RESER RESERVOIR*

The low water and great productivity of this reservoir caused a winterkill in 2002-2003. Rainbow trout and bluegill were stocked in 2003 to take advantage of an increase in reservoir water level. Fall netting, however, showed poor survival of both. As a result, two aerator windmills were installed in an attempt to increase dissolved oxygen, which seems to be a limiting factor in fish survival. In spring 2004, 2,000 two-inch bluegill sunfish were stocked and 3,000 five-inch rainbow trout were stocked this fall to substitute for reduced hatchery stockings in 2005, as Lewistown hatchery will be "mothballed" this season. Water levels in Reser are currently high and the fishing should improve.

### *ROSS RESERVOIR*

This beautiful mountain cutthroat fishery was rehabilitated in 2000 to rid it of suckers. It was closed in 2001 to allow fish to grow to acceptable size. Fishermen were not disappointed when the pond was opened in May of 2002. Good catches of 13 to15 inch cutthroat were made. Water levels were good this year and 2,000, 6 to 8 inch Yellowstone Cutthroat trout were stocked. An additional 5,000, 6 to 8 inch Yellowstone Cutthroat trout will be stocked this fall to substitute for reduced hatchery stockings in 2005 as a resulting from Lewistown hatchery being "mothballed" for the season.

### *OTHER REGIONAL RESERVOIRS*

Water levels in most reservoirs and streams in the western part of the region are full or near full going into the winter months. Fishing is projected to be good throughout the winter and into the spring. Please feel free to contact Havre Area Resource Office on the status of reservoirs before venturing long distances to fish.

### *LOWER MISSOURI RIVER FT PECK FLOW MODIFICATION PROJECT*

The Missouri River Biological Opinion developed by the U.S. Fish and Wildlife Service formally identified that seasonally atypical discharge and water temperature regimes resulting from operations from Fort Peck Dam have precluded successful spawning and recruitment of endangered pallid sturgeon in the Missouri River below Fort Peck Dam. In response, the U.S. Army Corps of Engineers proposes to modify operations of Fort Peck Dam to enhance environmental conditions for spawning and recruitment of pallid sturgeon. Proposed flow modifications were not implemented in 2004 due to insufficient Ft. Peck Reservoir levels. A thirty-five foot increase in the reservoir water level is needed before water could be released from the spillway. A high mountain snow pack in the Missouri Drainage and more conservative dam operations are needed for a spillway release to occur.

During April, the Fort Peck Flow Modification Crew, (which is a cooperative effort between MFWP and the USGS), FWP Pallid Sturgeon Study crew, and the U.S. Fish and Wildlife Service combined efforts to capture adult pallid sturgeon for hatchery brood fish. This was an exceptional year, as nine females and several males were sent to the Miles City State Fish Hatchery and Garrison National Fish Hatchery to be spawned and their progeny released back into the Missouri and Yellowstone Rivers.
The FWP Pallid Crew in Fort Peck is assessing the survival and growth rates of these hatchery reared juvenile pallid sturgeon. Transmitters were implanted in 70 of the juveniles and their movements were monitored from August through October. The purpose of this was to find some "hot spots" for other juveniles that were stocked in previous years and to determine habitat preferences. **Anglers should be aware that these fish are in the lower Missouri and Yellowstone Rivers and are illegal to possess.** Most of these fish can be identified by colored lines on the underside of their snout; however, anglers should release any sturgeon if they are uncertain of the species.

Native species telemetry (adults) was interesting again this year. The Missouri River from Fort Peck Dam to Williston, N.D. (220 miles) and the Yellowstone River from its mouth to Intake Diversion Dam (71 miles) was tracked every week from April through July and every other week from August to November in 2004. This year spring flows were very low in the Yellowstone River and at the same time, there were high releases out of Fort Peck Dam. This resulted in more relocations in the Missouri and Milk Rivers of our native fishes. Some interesting findings were a large number of paddlefish coming up the Missouri River with three of our radioed fish entering the Milk River and for the first time fisheries personnel documented pallid sturgeon in the Milk River. Some tracking was conducted above Intake, which resulted in seven relocations of blue sucker and shovelnose sturgeon as high up as Miles City. This is only one of many research components of the study. We also look at reproductive success through an intense larval fish-sampling scheme. The larval drift portion will give us an idea of how many river miles are needed for the sturgeon larvae to complete their ontogenetic development. The young-of-year component, gives us additional information on reproduction and recruitment.

When the spillway finally runs, some of the following questions should have answers: Will the adults move up the Missouri? Will they have successful reproduction? Will they come up far enough so that their larvae won't drift into the headwaters of Lake Sakakawea? Finally, will there be recruitment of these fish? Even with median run-off, 2009 would be the earliest a mini test could be run at Peck and 2010 for a full test, so answers will not come anytime soon.

The Adopt-a-fish program was a hit again this year. This program allows students to adopt one or two of our radioed paddlefish, blue sucker, shovelnose sturgeon, or pallid sturgeon, name it, and track their weekly movements over the internet. This program is growing in popularity, as we had schools from all around the state, North Dakota, Wyoming and even as far as West Virginia adopt some of our native species. This is a cooperative effort with Montana Fish, Wildlife and Parks, U.S. Geological Survey, the Billings Gazette, and Walleyes Unlimited. For more information or to adopt your own fish look up www.walleyesunlimited.com and click on the Missouri River Adopt-a-Fish icon.

## REGION SEVEN – MILES CITY

### *YELLOWSTONE RIVER PADDLEFISH*

Drought conditions continued to prevail in South Eastern Montana this year resulting in below average angling for paddlefish at the Intake Diversion Fishing Access Site.

The spring rise that usually triggers paddlefish migration from North Dakota was very minimal this past spring. Flows in the Missouri River exceeded those in the Yellowstone River causing paddlefish to migrate up the Missouri to pursue spawning efforts during the 2004 season. A total of 221 paddlefish were creeled at the Intake Diversion site. Investigations of paddlefish harvest on the Missouri system near Poplar, Montana indicated that an additional 100-200 fish may have been caught by anglers in this remote area. A phone-based creel survey, currently under analysis, will provide further information as to the number of fish caught on the lower Missouri River.

A number of young male paddlefish have appeared in the angler harvest the past two years. The harvest of these young fish indicates successful recruitment of the 1995 paddlefish year-class. Juvenile paddlefish which are spawned in the Missouri and Yellowstone Rivers but find nursery and rearing habitats in Lake Sakakawea have been tagged with small coded-wire tags since 1995. The arrival of these fish 10 years later as maturing adults indicates that the population of paddlefish continues to be self-sustaining.

### *OTHER YELLOWSTONE RIVER FISH*

The lower Yellowstone River continues to provide unique and positive angling opportunities for species such as channel catfish, shovelnose sturgeon, goldeye and smallmouth bass.

Catfish abundance and size remain strong providing a good angling experience almost anywhere along the river's length. Other species such as goldeye and smallmouth bass can test an anglers skills and abilities.

The sauger population in the Yellowstone River below Intake Diversion remains strong with a chance to catch a large individual of this species. Sauger numbers are less abundant as one moves up-stream but populations in the Glendive to Forsyth reach remain constant.

### *TONGUE RIVER RESERVOIR*

Angling at the Tongue River Reservoir was exceptional during the open water months of 2004. Abundant crappie and bullhead populations flavored with additional opportunities to catch northern pike, walleye and smallmouth bass kept angler's lines taut all summer long. The current crappie population is dominated by 5+ year old fish and should provide good fishing for this species for the 2005 season as well. The harvest of these fish was so popular this year that anglers often had to wait in line at the cleaning station during the busy summer weekends at the Tongue Reservoir.

Bullhead catfish are also abundant at the Tongue River Reservoir and have experienced exceptional growth. An evening along the shoreline with a standard hook and worm rig results in a bucket of bullheads of a size large enough to provide many good fillets.

Northern pike have re-entered the angler's creel at Tongue Reservoir during the past few years. The Montana State record northern pike came from the Tongue Reservoir in 1972. Northern pike have never been a dominant species in the Tongue Reservoir and despite stocking efforts over the past 20 years, have remained a marginal component of this fishery. The addition of 4 vertical feet to the Tongue River dam during the construction project of 1996-2000 resulted in shoreline vegetation being flooded in both 2000 and 2002. These events appear to have provided the habitat needed for northern pike in the reservoir to complete a successful spawning and recruitment effort.

Survey work at the reservoir during August, 2004 indicated that at least two strong year-classes of northern pike are in the fish population. It is doubtful that these fish will become a strong and standard component of the Tongue River fishery but the addition of this hard-fighting species is providing thrills for many young anglers. Their continuance in this system is based upon habitat. The old vegetation line that rings the reservoir provides spawning habitat and nursery cover for northern pike if the vegetation is flooded at the correct time of the year.

### *PRAIRIE PONDS*

The prairie ponds of SE Montana have really suffered from the impacts of drought over the past 4 years. The majority of ponds in this corner of the State have been plagued with some winter or summer kill due to a lack of water. Prairie snowmelt is needed to fill these small but productive fisheries and additional summer rains help to recharge the pond systems. Precipitation of any type has been sparse this past year and the prairie ponds have not produced as well as in previous years.

The prairie ponds that have sufficient water continue to be stocked each spring. These pond systems are very productive and once they are recharged stocked fish grow very rapidly.

The regional fisheries staff continue to survey the prairie ponds and publish an updated pond booklet that identifies the results of our most recent efforts and the locations of these small fisheries. Contact the R-7 office for a copy of this booklet or and update on pond conditions before venturing out to fish a prairie pond system.

# *MONTANA'S FISH RECORDS (through June 30, 2004)*

| **Species** | **Weight** | **Angler** | **Year** | **Location** |
|---|---|---|---|---|
| Arctic grayling | 3.63 lbs. | Glenn Owens | 2003 | Washtub Lake |
| Bigmouth buffalo | 57.75 lbs. | Craig D. Grassel | 1994 | Nelson Reservoir |
| Black bullhead | 2.33 lbs. | Darwin Zempel, Jr. | 1994 | Lower Flathead River |
| Black crappie | 3.13 lbs. | Al Elser | 1973 | Tongue River Reservoir |
| Blue sucker | 11.46 lbs. | Doug Askin | 1989 | Yellowstone River (near Miles City) |
| Bluegill | 2.64 lbs. | Brent Fladmo | 1983 | Peterson's Stock Dam |
| Brook trout | 9.06 lbs. | John R. Cook | 1940 | Lower Two Medicine Lake |
| Brown trout | 29.00 lbs. | E. H. "Peck" Bacon | 1966 | Wade Lake |
| Bull trout | 25.63 lbs. | James Hyer | 1916 | unknown |
| Burbot (ling) | 17.08 lbs. | Jeff E. Iwen | 1989 | Missouri River (near Wolf Point) |
| Common carp | 40.20 lbs. | Jared Albus | 1998 | Nelson Reservoir |
| Channel catfish | 27.17 lbs. | Ed Ellertson | 1998 | Castle Rock Reservoir |
| Chinook (king salmon) | 31.13 lbs. | Carl L. Niles | 1991 | Fort Peck Reservoir |
| Cisco | 1.75 lbs. | Curt Zimmerman | 2001 | Missouri River (below Ft Peck) |
| Coho salmon | 4.88 lbs. | Irven Stohl | 1973 | Fort Peck Reservoir |
| Cutthroat trout | 16.00 lbs. | William D. Sands | 1955 | Red Eagle Lake |
| Flathead chub | 0.59 lbs. | Douglas Jordan | 2001 | Thornton Pond |
| Freshwater drum | 21.59 lbs. | Matt Washut | 2003 | Fort Peck Reservoir - Ghost Coulee |
| Golden trout | 5.43 lbs. | Mike Malixi | 2000 | Cave Lake |
| Goldeye | 3.18 lbs. | Don Nevrivy | 2000 | Nelson Reservoir |
| Green sunfish | 0.56 lbs. | Roger Fliger | 1991 | Castle Rock Reservoir |
| Kokanee (salmon) | 7.85 lbs. | John Bomar | 2003 | Hauser Reservoir |
| **Lake trout*** | **42.69 lbs.** | **Ruth Barber** | **2004** | **Flathead Lake** |
| Lake whitefish | 10.08 lbs. | Theo Hamby | 1995 | Lower St. Mary Lake |
| Largemouth bass | 8.29 lbs. | Adam Nelson | 1999 | Many Lakes |
| Largescale sucker | 5.06 lbs. | Loren Kujawa | 1996 | Kootenai River |
| Longnose sucker | 3.27 lbs. | Ray Quigley | 1988 | Marias River |
| Mottled sculpin | 0.05 lbs. | Brad Sullivan | 2001 | Belt Creek |
| Mountain sucker | 1.6 lbs. | Robert Garwood | 2001 | Beaver Creek Reservoir |
| Mountain whitefish | 5.09 lbs. | Mervin "Frog" Fenimore | 1987 | Kootenai River |
| Northern pike | 37.50 lbs. | Lance Moyler | 1972 | Tongue River Reservoir |
| Northern pikeminnow | 7.88 lbs. | Darrel Torgrimson | 1991 | Noxon Rapids Reservoir |
| Paddlefish | 142.50 lbs. | Larry Branstetter | 1973 | Missouri River |
| Pallid Sturgeon | 60.00 lbs. | Gene Sattler | 1979 | Yellowstone River - near Sidney |
| Peamouth | 1.05 lbs. | Paul Teichman | 2002 | Flathead Lake |
| Pumpkinseed | 0.95 lbs. | Tim Colver | 1985 | Milnor Lake |
| Pygmy whitefish | 0.18 lbs. | Frank Gamma | 1999 | Ashley Lake |
| Rainbow trout | 33.1 lbs. | Jack Housel , Jr. | 1997 | Kootenai R. (David Thompson Bridge) |
| Rainbow-cutthroat hybrid | 30.25 lbs. | Pat Kelly | 1982 | Ashley Lake |
| Redside shiner | 0.1 lbs. | Josh Ahles | 2001 | Lost Lake |
| River carpsucker | 6.42 lbs. | Bill Odenbach | 2000 | Yellowstone River near Intake |
| Rock bass | .057 lbs. | Don Holzheimer | 1989 | Tongue River Reservoir |
| Sauger | 8.81 lbs. | Gene Moore | 1994 | Fort Peck Reservoir |
| Saugeye | 15.66 lbs. | Myron Kibler | 1995 | Fort Peck Reservoir - Squaw Creek |
| Shorthead redhorse sucker | 4.68 lbs. | Ray Quigley | 1985 | Marias River near Loma |
| **Shortnose gar*** | **7.02 lbs.** | **Ron Gulbertson** | **2003** | **Fort Peck dredge cuts** |
| Shovelnose sturgeon | 13.72 lbs. | Sidney L. Storm | 1986 | Missouri River |
| Smallmouth bass | 6.66 lbs. | Mike Otten | 2002 | Fort Peck Reservoir |
| Smallmouth buffalo | 32.63 lbs. | Richard Liesener | 1994 | Nelson Reservoir |
| Stonecat | 0.54 lbs. | Dale Bjerga | 1996 | Milk River |
| Tiger muskellunge | 27.00 lbs. | Dan Dupea | 1994 | Lebo Lake |
| Tiger trout | 4.04 lbs. | Joe Sobczak | 1997 | Bear Lake |
| Utah chub | 1.81 lbs. | Eugene Bastian | 1992 | Canyon Ferry Reservoir |
| Walleye | 16.63 lbs. | Danny Spence | 2000 | Fort Peck Reservoir |
| White bass | 2.25 lbs. | Vernon Pacovsky | 1998 | Missouri River |
| White crappie | 3.68 lbs. | Gene Bassett | 1996 | Tongue River Reservoir |
| White sturgeon | 96.00 lbs. | Herb Stout | 1968 | Kootenai River |
| White sucker | 5.33 lbs. | Fred Perry | 1983 | Nelson Reservoir |
| Yellow bullhead | 0.93 lbs. | Carl Radonski | 1996 | Tongue River Reservoir |
| Yellow perch | 2.37 lbs. | Vernon Schmid | 1988 | Ashley Lake |

*New Montana record since September 30, 2003